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PREFACE.

THE FLORIST'S JOURNAL was projected for the express purpose of supplying a desideratum in floral literature, which had long been apparent to the proprietors and the conductor, and complained of by the most eminent professional florists. There was no periodical at a moderate price, the general principles explained in which had any claim to philosophy, or consistency with nature; the practical directions were, in no case, the *bonâ fide* productions of first-rate cultivators, or the illustrations directly taken from first-rate flowers, and faithfully represented. On the contrary, the cheaper journals were mere gatherings of scraps, of no great value individually, and useless as a whole, from the want of connexion and bearing upon any general principle. They were, in fact, the mere bodies of journals without any spirit; and thus the purchasers of them just looked at the pictures, and then laid them aside. Nor could it well be otherwise; for not one of them could possibly have originated from a desire to improve the art; and so badly were some of the editors qualified for their duties, that, in a holograph letter by one of them, now lying before us, there is not one grammatical sentence, or any two sentences which have the least logical connexion. Then, the illustrations were just what the parties could get, and how they could get them; and truly they represented a new floral world, as different from Nature's own Flora as can well be imagined. Even this was not all, nor the worst. Men of ignorant or ill-trained minds are always prone to fall into idolatry of some kind or other; and so the parties under consideration contrived to set up a whole pantheon of *Josses*, some of them most whimsical ones. One, for instance, worshipped the writings of some man of name, for no apparent reason, other than that nobody could under-

stand them; a second paid his adoration to a party or clique which he fancied he had attracted around him; a third adored his own pocket; and it is even whispered that a fourth bowed the knee to his own—nonsense.

Now, first-rate florists, like first-rate men of all professions, are necessarily men of talent; and, so, it is not possible that they could help discerning the weakness and worthlessness of such things, which would naturally move them both to pity and to aversion. Accordingly, when we began our labours, and it was known that we were for the profession, and for its improvement generally, and not for any partial or paltry purpose, we were hailed and encouraged in the most cheerful manner, by men of whose connexion we have every reason to be proud; and this co-operation being volunteered to us, the mercantile department of our work has gone on flourishing, so that we shall be enabled to avail ourselves of every real improvement that can be suggested.

Thus supported and encouraged, we shall be enabled to give our Journal each of the three qualities which such a work ought to possess, in order to effect all the good which it is capable of producing. In the first place we shall be enabled to explain, without the mystification of hypothesis, or the jargon of technical words, those general principles upon which the art of floriculture is founded, and which enable any florist to extend the field of his labours as he sees occasion. In the second place, we shall be enabled to furnish descriptions of favourite flowers, and the best method of cultivating them by the most eminent parties who are engaged in that cultivation. In the third place, our pictorial illustrations will form one of the most unique and accurate, and therefore most valuable collections of floral portraits ever offered to the public. Besides these three grand qualities, we shall be always ready to answer questions, clear up doubts, or put our readers in possession of any information which they may desire, and we and our cooperators can supply.

THE

FLORIST'S JOURNAL.

MAY 1, 1840.

PRELIMINARY OBSERVATIONS ON THE PLEASURES AND ADVANTAGES OF CULTIVATING FLOWERS.

THE pleasure derived from flowers is one of the simplest, sweetest, and least animal of all the gratifications of the senses; and it is a pleasure which is inexhaustible in its variety, and which may be enjoyed by every one, from the wealthiest owner of the stove, the conservatory, and the parterre, down to the humble possessor of the smallest patch of ground, or even of a single flower-pot in the window.

Its variety may be understood, when we mention, that there are dispersed over the surface of the globe upwards of forty thousand distinct species of plants which bear flowers; and from the number of new species which have, in comparatively recent times, rewarded the labours of collectors, we cannot suppose that the entire number, or any thing approaching to it, is yet known, even to those best skilled in plants. This vast number of flower-producing vegetables is variously distributed over the globe, in its different regions, according to the several latitudes, climates, and characters of soil. In this respect, the usual estimate is, that there are upwards of thirteen thousand flowering-plants natives of the intertropical parts of America, considerably more than five thousand in tropical Asia, and three thousand five hundred in tropical Africa. In Australia, and the numerous islands with

which the wide expanse of the Pacific is studded, either within the tropics or not very far without them, there are about five thousand species already known, though some of the largest and most tropical of those islands have been but imperfectly explored. Temperate America, in both hemispheres, contains about four thousand; temperate Asia about two thousand; and Europe, which lies wholly within the temperate zone, contains at least seven thousand distinct species of plants which bear flowers. In the polar regions of all parts of the world, flowering-plants are comparatively few; and nothing is known of the vegetation of such islands as lie within the southern polar circle. If, however, we may draw any inference from the vegetation of the extreme south of the American continent, we would be disposed to infer that the southern islands should be more flowery than northern lands in corresponding latitudes; for this part of America very nearly corresponds to the latitude of Britain, where the mountains and wastes, even in certain soils in the extreme south, are covered with Heather; whereas, the corresponding surfaces of Patagonia are covered with Fuchsia, over which certain species of humming-birds sport in the summer months, just as bees do over our heather when in bloom, though not, perhaps, exactly for the same purpose.

When we consider the numbers above stated, it may appear that there is a great redundance in one part of the world, and a great deficiency in another; as, for instance, it may seem strange that Europe, which has a very limited surface compared with those of temperate America and Asia, should contain seven thousand native species of flowering-plants, while the other two together contain only six thousand. It is to be understood, however, that the variety of plants depends not so much upon the absolute breadth of surface, as upon its varied character. Thus, it will be found that there are more flowers, that is, more species of flowers, upon a small steep bank, sloping down to a lowland stream, than there are upon many square miles of the surface of a heath-clad mountain. This explains why Europe should have more indigenous flowers than the temperate parts of both the other quarters; for the surface of Europe is exceedingly varied, and its climate is in many places as variable, whereas temperate America and temperate Asia are far more uniform in both of these respects.

Such is the extent of the field which nature offers to the cultivator of flowers; and, in as far as any species may happen to have attractions in its natural state so as to draw his attention, his art may extend this field almost indefinitely, by the obtaining of varieties of every species, and, in many instances, by changing entirely the natural appearance of the flower. Thus, for instance, the Dahlia, in its native habitat in tropical America, is a very simple blossom, with only a single row, or whorl, of petals, or flower-leaves; and yet cultivation, in a far distant country, and differing greatly in its climate, its seasons, and all its physical circumstances, has so bred the Dahlia, and broken it into varieties, that it is now the most showy of all the autumnal flowers; and, from being at first exceedingly rare, and a nursling of the stove, it is now to be met with in every cottage garden, where the cottager has taste enough to occupy a portion of his leisure time in cultivating flowers. Not only this, but it is found to be one of the flowers of most easy growth. It will not, indeed, bear the frost, which is the case with most of the flowering-plants of intertropical America,—even with the Potato, which thrives in the coldest districts, and which, had its tubers not been found so valuable as an article of food, would, in all probability, have been esteemed as a flowering-plant; and had it been bred for the sake of flowers instead of tubers, there is no saying what beauty the bloom of it might have acquired.

As flowers, in the great majority of their species, are children of the sun and the free air of heaven, we might be prepared to expect the greatest number of them, and those of the most splendid natural appearance, in the sunny lands near the equator. Observation agrees with this, as taken on the whole; but, as many of the equatorial lands are to great extent seasonal,—that is, pelted by rain at one time of the year, and parched by drought at another,—the appearance of those lands to a visitor is widely different, according as he comes when the one or the other of these characters of season has produced its full effect. If he comes when the rains are just over, and the flood which they pour upon the level surfaces has newly ebbed away, then the land seems an Eden of fertility, glowing with blooms of every colour which imagination can picture to itself, and all so vigorous, that the progress of their growth seems almost palpable to the wondering and delighted stranger. But if his visit is made when the drought

has done the utmost that it can do, the erewhile flowery field is a parched and barren desert, upon which the stranger could hardly suppose that vegetation durst ever venture to appear. But, according to that beautiful law of nature whereby all the parts are exquisitely adapted to each other, both in place and in season, the vegetation of such places of the world suits their physical character; and when they are artificially raised in any different climate, the temperature of their native climate, and the succession of those seasons for which they are naturally adapted, must be imitated as nearly as possible. This can be done only by the artificial heat of the stove, and by watering copiously, or abstaining from water altogether, according as the state of the plant, found by experience, or judged of from its habits in its native country, may appear to require.

This is one portion of the extreme cases of the cultivation of plants for the sake of their flowers; but it is one which can be practised only by the opulent, or by the profession who cultivate such plants for their supply. It is necessary, however, that every one who cultivates plants should know something of the general principle according to which the plants of one climate may be most successfully grown, and especially made to bloom in perfection, in another and a different one. The pleasure of this is of a higher order than that derived from the mere possession of any flowering-plants, how beautiful or how rare soever the blooms of those plants may be. The profit derived from it is also correspondingly great; for, when a man cultivates and attends to a flowering-plant which is a native of any country, the love of the plant will very naturally lead him to the desire of knowing something about the country which produces so fine a flower; and there is so much general knowledge abroad upon such subjects, and it is now so readily and so cheaply to be obtained, that the flower becomes a silent but delightful teacher to the florist, to a far greater extent than those who have not attended to such subjects would be apt to suppose. Indeed, whatever may be the species or the original native locality of the flower which is loved and cultivated, it will invariably be found that, whether learned or unlearned in the scholastic sense of the word, the cultivator of flowers is a more intelligent as well as a more amiable character than he who looks upon those gems and essences of the material creation with an eye of perfect indifference. In attending to

flowers, there is nothing that can in the least degree excite the merely animal appetites or passions, or stir up enmity or mischief against other men; and, therefore, floriculture is a direct means of virtue, by preventing or weakening its opposite in the very first formation of the desire.

We are not now speaking of those with whom the culture of flowers is a profession, or of the opulent, who, though they admire flowers, employ others to do the labour of the cultivation. We are speaking only of those who cultivate flowers on account of the pleasure which they take in so doing, and who thus substitute floriculture for the less simple and innocent occupations of the leisure hour in which they who do not resort to some such natural amusement as this are but too prone to indulge, and to the indulgence of which they are often drawn, and induced to continue in it, by the example and enticement of others. Now, apart from the direct pleasure that the cultivator derives from watching the progress and perfection of his flowers, as the result of his own skill and handiwork directing and seconding the powers of nature, their cultivation enables the man to live, for the time at least, happy in his own society, which is one of the best foundations both of contentment and of virtue; for there has been many a man, who, to escape the ennui of his own company, has sought the company of others, and by this means, in the end, materially injured, or even altogether ruined, both his fortunes and his happiness, and entailed the severest afflictions upon those dependent upon him.

If to those classes of the community to whom we allude, floriculture had no other beneficial effect than this, it would still have ample recommendations in the estimation of every well-wisher of mankind; but it has many others, though we shall content ourselves by mentioning only one of them. Among all the good habits of mankind, there is probably not one more valuable than the habit of regularity, in timing what we have to do to those seasons at which it can be most advantageously done; and as every flower, that is, every flowering-plant, has its seasons at which it requires attention, in order to bring it to maturity at its appointed period, and even to preserve its healthy and pleasant appearance at all times, it teaches habits of attention in all other matters. So effectually, indeed, do a regular attention to flowers and plants of every description, and the reverse of

this attention, have this effect, that the garden of the [illegible], overrun with weeds, is a figurative expression used in Holy Writ for a man who is careless and indifferent in all matters; and if one enters an apartment in which even a few flowers in pots are kept, and finds those flowers neglected, ragged, and of sickly appearance, then one may conclude with perfect certainty, that the owner of these neglected flowers is slovenly and negligent in every matter of which he has the charge. Thus, a fondness for flowers, and a careful and judicious management of them, are both the means and the indications of a virtuous and orderly habit in all matters; and this quite independently of the pleasure or the profit which the flowers themselves directly furnish.

We have thought better to take this moral view of Floriculture, than to expatiate on the pleasure derived from paying attention to that in which every body takes delight; but there is yet another, and certainly not a less valuable inference that may be drawn from cherishing or neglecting those finest, but feeblest and most fleeting, of Nature's children. The love of flowers for their own sakes, is, perhaps, the most unmixed instance of the love of beauty which is anywhere to be met with; and if the sentiment of beauty can once be made to occupy a high place in the mind of any man, it tends more to root out the mean and grovelling appetites than any other we can name. If we find that a man has a garden, whether large or small, attached or approximate to his dwelling, and that this garden lies in a state of neglect and is flowerless, then we may rest assured, that the man is of low, grovelling, and selfish character, and that all his pleasures—if pleasures we can call them—have in them the animal lording it over the intellectual part of the man. Such a man may be of high rank in society, in as far as wealth, or any other circumstance in which the man has no real merit, is concerned, or he may rank low in the sense of the term; but we may rest assured that the man with the neglected and flowerless garden has always about him something mean and tending to grossness.

When we began this preliminary article, it was our intention to offer some remarks upon the general principle according to which flowers are improved by cultivation; but we have space left only to enunciate the principle, and must leave the illustration of it to some future opportunity. The principle is this:—our power of improving flowers, that is, of breaking them from those

appearances which they have in wild nature, depends in no small degree upon the difference of the circumstances in which they grow naturally, and those in which we rear and train them artificially. It is true that some plants will bear only a limited change, while others admit of change to a very great extent; but notwithstanding this, it is a general law in floriculture, that the more different treatment it can bear from that which nature gives it, the more may it be improved by the cultivator. There is also another general principle:—plants, including flowers, evergreens, and all others, of what description soever they may be, can bear much better to be transported from warm latitudes and situations to cold, than from cold to warm. There are two causes for this:—in the first place, a plant never produces a flower so long as it can effect an increase in that volume of its system in which the flower for the period of flowering has its beginning; and in the second place, the artificial treatment which can be best applied is that which approximates a transfer to a climate warmer than our own. When the plant of a cold climate is taken to a warm one, the tendency of it is to run to stem and leaf, and not produce any flowers at all,—as is the case with the gooseberry trees which have been transported from Britain to the island of St. Helena. In that island, they have become evergreens, producing no berries and few flowers, but extending themselves by the roots, so as to form a sort of copses or jungles. In the case of other plants removed to warmer climates, the produce of leaf and stem is so great that the season of growth is over before they can perfect their flowers. On the other hand, when flowers, natives of warm latitudes, are transported to colder ones, they have less tendency to run to stem and leaf, and more to flowering; still, however, it is not the fertile functions which are increased; it is the adjuncts of these—the petals; and it is no uncommon circumstance to find the anthers, whose natural office it is to render the flower fertile, changed into petals. Indeed this may be said to be the case with all double flowers which are obtained by the art of the cultivator; and in many instances those double flowers are entirely barren, and can be multiplied only by cuttings of the original plant.

These circumstances, however, apply much more to the operation of climate and seasons upon the plant, than to the soil upon which it is grown. In that there must always be considerable

similarity, otherwise the plant cannot be kept alive for any length of time, though it may flower ever so abundantly during the time that it lasts.

From this, there are several important conclusions to be drawn. In the first place, plants which are improved by art in the countries where they are native, are both more difficult to improve, and more prone to fall back to their original than other plants which come from a different and a distant country. We have instances of this in the Hyacinth and the Heart's-ease, both of which have been bred to become very fine flowers; but neglect speedily sends them back again to the characters of the Wild Hyacinth and the Field Pansy. We cannot, however, afford room to pursue this interesting subject to greater length in the present article; but we have thought best to give some instances of the pleasure, information, and utility, of cultivating plants, rather than to attempt proving by argument that which we suppose nobody who understands anything about the matter is inclined to deny.

ON THE AMARYLLACEÆ.

WITH AN ILLUSTRATION.

In commencing a Florist's Journal, chiefly intended for the general lovers of flowers, it may appear rather extravagant to launch at once among tropical plants, and select a figure of one of the finest specimens of one of the most splendid families of Flora's kingdom; a plant which but few possess, and which but few can cultivate. But the fact is, this has happened more from accident than design. The drawing was admitted into our portfolio among other beauties intended for the work, and being new as well as beautiful, it was chosen, not as an *eye-trap*, certainly, but simply as an interesting frontispiece.

1. The Amaryllis family has always been noted, not only as commemorative of a favourite nymph of Virgil, but as embellishing the wilds of Mexico and southern Africa, and also for the facility with which the bulbs are transported from their native beds to our frames and hothouses, of which, when in flower, they are the most attractive ornaments.

There are of this genus nearly forty species, chiefly natives of the hotter parts of the isles and continents of America and Africa. One only is a native of Siberia; and one is found wild in North America, namely, the *A. formosissima*, which, from the deep red colour of its ample flowers, is one of the most conspicuous of the whole genus.

Between the species *striatifolia*, *intermedia*, *reginæ*, *vittata*, *Forbesia*, *rutila*, *fulgida*, *pulverulenta*, *tortulosa*, and others, numerous hybrids have been raised from seeds by cross impregnation; and it really requires the keen eye of an experienced botanist to detect the species from the varieties, when many are in flower at the same time; for many of the hybrids excel the species in beauty, and are no less valuable as ornamental plants.

A good deal of practical tact is necessary in the culture of the Amaryllis, in order to cause them to flower frequently and well. The late Mr. Sweet, F.L.S., studied this tribe, and originated more hybrids than any other botanist in Europe. He also excelled in the management of them, and found that a majority of them require to be turned out of their pots of soil in the autumn, and laid on a dry shelf, in a warm place, till they show their flower-buds, when they must be immediately potted, and set in the place where they are intended to flower—that is, on the curb of a pit, or other platform, in the hothouse. In summer, they are flowered in frames, or in the green-house. The two species, *A. reticula* and *A. striatifolia*, do not require turning out of the pots, nor do the hybrids belonging to them; so neither should *A. aulica*, *A. calyptrata*, nor *A. solandræflora*, be turned out, but only occasionally shifted.

The best soil for the generality of the Amaryllis family, is a mixture of light sandy loam, to which is added a fourth of white sand and turfy peat. The compost should not be sifted, as the plants do not thrive if the earth becomes close, which sifted soil is apt to do when frequently watered. The drainage by broken crocks, or rough gravel, ought to be carefully put in the bottom of each pot, lest the hole in the centre should get stopped, so as to prevent the escape of water.

The seeds of these bulbs should be sown as soon as ripe; and when the seedlings are a few inches high, they should be potted singly into small pots, or several together in larger ones. If then placed in a frame, on a little heat, they will progress rapidly;

and if kept shifted from small to larger sized pots, will soon arrive at a flowering state.

Raising new varieties from seed is always an interesting amusement, as it involves the hope of originating something surpassingly beautiful.

Our accompanying illustration, *Amaryllis Victoria superba* is a hybrid, from seed of *A. vittata superba*, impregnated by the pollen of *A. Johnsonia*. This very beautiful variety is from the choice collection of Messrs. T. and C. Lockhart; its deep rich colour, and clear stripe running from the base of each petal to the very apex, render it a most striking object, and worthy a place in every collection.

We understand Messrs. Lockhart intend offering it to the public next season; but from the length of time this genus requires to arrive at maturity, the issue will necessarily be limited.

2. In this stage of our Journal, and at the gay season of the year, there are many beauties which present themselves to our notice; nor need we leave the natural order *Amaryllaceæ* for attractive objects. In this, we find one flower which is, perhaps, more heartily welcomed on its first appearance than any other; we mean the lowly Snowdrop (*Galanthus nivalis*), but which has now retired to its summer repose. We have still, however, the gaudy (and common, because gaudy,) family of Narcissus, of which seventy-six species are described by botanists, together with above twenty varieties. This ornamental family of the spring months present a wonderful diversity of size and form; for between the rustic Daffodil, and the sweet and slender Jonquil, there are a hundred intermediate forms. If we look for the most perfect symmetry, united with delicacy of texture, and the purest tints of colour, observe only the Poet's Narcissus, *N. poeticus*. If we can admire disproportion of the floral members, let us examine the Hoop-petticoat (*N. bulbocodium*), or the mighty Ajax (*N. Ajax*), blowing his extended trumpet. Again, if we would see a group of elegant blossoms on the same stalk, we refer to the admirable Polyanthus Narcissus (*N. Tazatta*), so extensively cultivated by professional florists. In short, a collection of Narcissi presents a most pleasing spectacle of variety and beauty. No flower requires less attention than this; the more choice sorts, indeed, are usually planted in autumn, in prepared beds of sandy loam, leaf mould, and thoroughly rotten dung; but in general they succeed very well in any common soil.

Some amateur florists take up the bulbs every year; but this is not absolutely necessary for any of them. If raised once in three or four years, to divest them of offsets for propagation, and to place the largest bulbs in fresh soil, is all that is necessary.

The Narcissus belongs to the sixth class, *(Hexandria,)* and first order, *(Monogynia,)* of Linnæan botany, and, as already observed, to the natural order *Amaryllaceæ*.

3. Alstræmeria. This is a genus found in South America; and we have had for many years several of the species in our hot and greenhouses; but it has been lately discovered that the natives of Chili and Peru, as well as some of the Mexican species, will survive our winters very well, if on a warm sheltered border, and covered with a mat in severe frost. As some of the flowering sorts are climbers, and send up their stems every spring to a considerable height, they are best planted against a wall, to which the stems and flowers may be supported.

As this is a new beauty in our gardens, it is well worthy introduction, especially as the plants require no particular management. The tuberous rooted species are tenacious of life; and for them any light soil is suitable.

The Alstræmerias belong to the first order of the Hexandric class, having six stamens and one style, and to the natural order as above.

4. Snow-Flake (*Leucojum vernum*), otherwise called the Summer Snowdrop, is a hardy bulbous plant, native of Europe. It grows anywhere in the common borders, and is propagated by offsets from the root. There are spring, summer, and autumn flowering species of this genus, all of the easiest cultivation. Their snowdrop-like flowers are Hexandrious, and belong to *Amaryllaceæ*.

5. Among that tribe of plants called Bulbs, there are numerous genera which are particularly attractive. Many, from the amplitude and vivid colour of their flowers, are magnificent; others are remarkable for the graceful form and disposition of the blossoms; and not a few are singularly beautiful from their minute simplicity and sparkling elegance. Among the latter, we would notice with particular commendation the interesting family of the Scillas, which, in the early spring, bespangle with azure bells our beds and borders of the parterre.

The Scillas, or Squills, of which there are above twenty species,

are chiefly natives of the northern hemisphere; one only has been discovered in India; one, an esculent bulb, in North America; two African; and all the rest are from Europe and Siberia. How delighted the half-savage boors of the last-named country must be, when they first observe the *Scilla præcox* peeping through the edge of the wasting snow, to usher in their short though fervent summer! And even in this country, and at the present moment (April 17th), it is refreshing to see the little blue bells peering forth from among their scanty leaves; though assailed at once by both a dry easterly wind and a cloudless sun.

Nor is it only in the flower-garden that the Scillas are so conspicuous. If we walk into the woods, coppices, or among the hedge-rows of the rural districts, there the Blue Bell *(Scilla nutans)* is seen fringing every bush, and bordering every path. This Wild Hyacinth, as it is provincially, and as it was formerly called by men of science, *Hyacinthus non scriptus*, is eminently ornamental, from the vast masses in which it appears, its bright tints, and drooping position of each individual spike of flowers; and if we examine narrowly those masses of beauty, we may observe some that are pure white, others cream-coloured, others again reflecting the tint of the amethyst, and some few the glow of the ruby.

The famous medicinal Squill was formerly placed among the Scillas, and known as the *Scilla maritima*, or Sea Onion, a native of the sandy shores of Spain, France, and Italy, washed by the Mediterranean. In these localities it is plentiful, and grows to a large size. The bulb is extremely bitter, and is esteemed as an expectorant, nausent, and diuretic. This celebrated plant is, however, no longer a Scilla, but the *Ornithogalum Squilla* of modern botany, and allied to the no less celebrated bulb, called "*dove's dung*," so valuable during the famine in Samaria, as related 2 Kings vi. 25.

Our favourite flower-garden Scillas are the *S. Italica; S. Peruviana; S. lileo-hyacinthus; S. amœna*; *S. Siberica; S. præcox; S. verna; S. hyacinthoides; S. bifolia; S. campanulata*, &c. They all flourish in a light sandy soil; and as the bulbs of some of them are small, they are best kept in pots, plunged in the borders, as a precaution against losing them. Many of the Scillas are of humble growth, and therefore should be placed near the edge of the border, in order to be near the eye; such of them as have

the port and semblance of the common Hyacinth, namely, the *S. campanulata*, *S. hyacinthoides*, and the like, may be placed farther from the verge.

The Scilla belongs to the sixth class *(Hexandria)* and first order *(Monogynia)* of Linnæan botany; signifying that the flower has six stamens and one style in the centre. In Jussieu's system, the Scilla is arranged in the natural order *Asphodeleæ*, which comprises many other bulbs as well as fibrous rooted plants, both useful and ornamental: of the former the Onion and Asparagus are examples.

6. The Dog's-Tooth Violet *(Erythronium Dens Canis)*. This is a pretty little bulbous or tuberous-rooted plant, and an early flowerer. The leaves are longly-ovular, and lance-pointed; like most other leaves, they are green, but irregularly mottled with green of a darker hue, and have a reddish tinge all over. The flowers are solitary, on slender footstalks, and nodding; the petals are lanceolate, spread out horizontally as if to defend the stamens and style from rain or sunshine; the colour of the flower is either red, purple, pale purple, or white. There is one variety with smaller flowers; and two species, natives of America—namely, *E. lanceolatum*, having yellow flowers, and *E. albidum*, with white flowers. The first of these grows best in peat soil; the second, and all the others, succeed in any common garden soil.

All the sorts increase themselves by offsets from the root, which should be taken off and planted separately. The plants being of humble growth, they look best when planted in little beds by themselves; indeed, all such flowers look best, and are most interesting, when disposed in groups.

The Dog's-Tooth Violet belongs to the sixth class, (having six anthers,) and to the first order (having one style) of sexual botany; and to the natural order *Liliaceæ*.

7. The American Cowslip *(Dodecantheon meodia)*. This is an unique genus, there being varieties, but no other species. It is a native of Virginia, but it grows and flowers as well in this country as it does in its native habitat.

The leaves are as large, though not so pointed, as those of the lily of the valley, but are spread on the ground instead of standing erect. Like our English cowslip, the flowers are produced in an umbel, from the top of the stem, and are from thence most gracefully pendent. The outer and inner cups of the flowers are

reflexed; the former are green, and the latter pale purple, exposing the anthers, which are united like a beak, enclosing the style in their embrace. The flower resembles an inverted cone, of the greatest elegance; the whole, together, forming a beautiful truss of lovely flowers.

The plant should have a good rich loam to grow in, and in which it will arrive at its greatest magnitude; for the stronger it grows, the more intense are the colours, and more numerous the trusses.

There are at least two varieties of this favourite plant, namely, *D. elegans*, and *D. gigantea*, which are superior to the original, both in bulk and beauty. They are all propagated by division of the root, and easily cultivated, if not allowed to stand too long in the same spot.

The Dodecatheon belongs to the fifth class, and first order of Linnæan botany, and to the natural order *Primulaceæ*. Why it should be called *Twelve Divinities*, is uncertain.

8. SOLDANELLA is a beautiful little Alpine genus, of which there are four species in our collections. They are generally kept in pots, placed in frames, and brought to the greenhouse, or to the windows of sitting-rooms, when in flower. The flowers are star-shaped, and either purple or bright blue, and are really beautiful from their regular form and neatness, especially when the diminutive size of the plant is considered. The species already described are the *S. alpina*, *S. montana*, *S. minima*, and the *S. pusilla*. Two-thirds peat and one-third sandy loam, is the best soil for them. They are increased by seeds, or by parting the roots. The flowers are Pentandrious, that is, they have stamens and one style; and belong to the natural order *Primulaceæ*.

9. CYCLAMEN is another beautiful tuberous rooted genus, also belonging to the fifth class and first order of sexual botany, and to the same natural order *Primulaceæ*. In Greece, and the south of Europe, where the plants are wild, they are called *Sow Bread*, from the circumstance of hogs being excessively fond of the tubers. There are nine species of the genus; three of them, namely, the *C. coum*, *C. vernum*, and *C. Europæum* are pretty hardy, and flower well in a rich light soil. They are usually, however, flowered in pots, for the convenience of placing them on flower-stands. They should be shifted into fresh compost every autumn,

and kept in a frame till they show flower, and, in the mean time, not exposed to severe frost. The other species require the protection of a greenhouse. They are readily increased by seed, which should be sown as soon as ripe. The flowers are light red, or purple and white.

10. The PRIMROSE (*Primula vulgaris*). Of this well-known tribe we have many native species; the common (*Primula vulgaris*) embellishes every sunny bank, sometimes as early as Christmas. It is a peasant's flower; and however homely his employment, or lowly his thoughts, or contracted his views of nature around him, he rejoices to see the return of his early favourite, and exults among his neighbours that he has already gathered in the wooded dell, a beautiful *rose!* The Primrose is succeeded by the Oxlip (*P. elatior*) and the Cowslip (*P. veris*), and many varieties of each, some of which are admitted into the flower-garden, especially the double-flowering and deep-coloured ones. Besides our natives, there are many which have been introduced into Britain from the mountains of continental Europe, Asia, and America. These little exotics are usually kept in pots, require frequent parting and shifting, and the protection of a frame in frosty or very wet weather.

But the most esteemed of the family are the Polyanthus (*P. elatior polyantha*) and the Auricula (*P. auricula hortensis*), both of which are emphatically called "florists' flowers," because they receive peculiar treatment, and the best specimens are highly valued.

The first-rate Polyanthuses, if intended for show or stage flowers, are kept in pots, but otherwise are planted in beds, on a border having an east or north aspect. The best soil for them is composed of fresh and rather sandy loam, mixed with leaf-mould and well-rotted old hotbed or cow dung. The natural soil of the beds, if unsuitable, should be excavated ten inches deep, to receive the compost; this being raised two or three inches above the general surface. On the beds, the plants are put in at equal distances of eight inches apart. In dry weather, they require frequent supplies of water, and to be kept free from slugs and snails, or any kind of insect which may prey on either leaves or flowers. When the flowers fade, the stems should be cut off, unless it is wished to save seed. As the plants are prolific of seed, they are weakened by its production, if not wanted. If any have been bloomed in pots,

they should, immediately after flowering, be either plunged or turned out on a north border, to be safer from drought, which is injurious to their fibrous roots. They are propagated by slips and seed; and from the latter new varieties are obtained.

11. The AURICULA (*P. auricula hortensis*) is a highly esteemed stage flower; and no plant requires or receives more attention from the cultivator than this. New varieties are procured from seed, which is chosen from the most favourite sorts, the breeders being kept apart from the mixed collection while in flower, and those only whose properties are wished to be united are placed near together.

When the seed is ripe, the capsules, or seed-vessels, become dry and brown. When this takes place, the capsules should be gathered and kept in a cold and moderately damp rather than in a very dry place till the month of January, when the seed should be sown. Boxes or large seed-pans are used as seed-beds; they must be well drained at bottom, and be nearly filled with light and fresh maiden loam, enriched a little with leaf-mould and well-decayed sheep or cow dung. On the smoothed surface, the seed is sown, and covered with fine compost sifted over about as thick as a crown-piece. A slight watering, lightly thrown on, is given, and the box, &c. is then set in a frame, on a little heat, if such opportunity offers, otherwise in the front of a greenhouse or back of a cold frame, and there covered with a hand-glass or with pieces of window glass. During the growth of the seedlings, they must be kept moderately moist, gradually exposed to air, shaded from the sun at noon, and when large enough to handle, are pricked out into middle-sized pots, in which they are nursed till August, when they are again transferred singly into the smallest sized pots, in which they remain to flower.

Established plants, in pots, are shifted in July or August in every year, and in February have a top-dressing of richer compost to assist them to flower strongly. This plant delights in pure dry air; and on this account, the pots containing them are constantly kept on a stage, to face the north-east in summer, and the south in winter, the back being close, and defended from frost and immoderate rain by a boarded roof.

Auricula growers form very rich composts for their prime varieties. One successful amateur uses fresh yellow loam, rotten cow dung, desiccated night-soil, leaf-mould, and about a tenth of sea or river sand, all well incorporated twelve months previous to using.

12. The Tiger Flower (*Tigridia pavonia*), otherwise called the Peacock Flower, is a most remarkable vegetable production. It is a Mexican bulb, yet flowers freely in our summer; but being impatient of frost, is taken out of the ground before winter, and stored away in a dry place out of the reach of even a slight frost. Tying the bulbs in bundles by the withered remains of their leaves, and hanging them to the ceiling of a warm room, is a safe plan.

The bulbs should be replanted about the beginning of May, in a dry bed of sandy soil, in order to their flowering in summer. The flowers are large, and are developed consecutively; each consisting of three broad petals, of a deep yellow, or orange, curiously spotted with deep brown; hence the name. The blossoms are fugitive; but as they come forth in succession, this is less to be regretted. The striking contrast of colour in the petal is a remarkable circumstance, and difficult of explanation. Indeed, the cause of the various tints of colour on the same petal, is one of those obscure phenomena which we shall never, probably, be able to conceive, or expound.

There is one variety of the pavonia called the *leona*, or lion; and a distinct species, called the *conchiflora*, or shell-flowered; a splendid ornament of the flower-garden.

These plants belong to the sixteenth class and first order of Linnæan botany, having three stamens united at the base, and, in the natural system, they rank with the *Irideæ*.

VISITS TO NURSERIES. No. I.

KENSINGTON NURSERY.

Some years have elapsed since we last visited these respectable old-established nursery grounds; and we have seen few things that has gratified us so much as the improvements that have been recently made here. It being our intention in this Work to relate all that pleases us in the leading nurseries, we cannot avoid beginning here.

These grounds rank among the oldest in the neighbourhood of London,—established by the late Mr. Greenwood, who spent a long life in collecting every thing that could interest the horticultural or botanical world ;—and, after his death, followed by the late William Malcolm, whose long and active life is well known to all horticulturists.

This nursery, so long valued for its extensive and interesting collection, has been remodelled entirely, and brought out in the most perfect manner. A new entrance, by folding gates, has been made, away from the business entrance, leading from the great west road, opposite the royal gardens. A splendid wide gravel walk has been constructed, with stone edgings, leading longitudinally and centrally through the ground, between four and five hundred yards. Right and left of this walk, at appropriate intervals, handsome classic vases are placed, of varied character, with terra cotta shells, &c. In these are happily cultivated the more showy new trailing plants, suitable for the style of terrace gardening. On either side of the walk is a wide shrubby border, completely studded with the most select ornamental trees and shrubs, with their names attached. The backs of these borders are planted with the following genera :—Magnolia, Crategus, Mespilus, Sorbus, Cotoniaster, Robinia, Sophora, Kolscuteria, Rhus, and every thing of an interesting kind. In front of these, come Ribes, Sperca, Rose Acacea, Berberis, and a whole host of pretty things in the flowering-shrub way. Next come standard and half standard Roses, of all the select kinds. Interspersed among all of the inhabitants of these borders are herbaceous plants, and select annuals, forming, as it were, altogether two sloping stages of plants, varied, in flower, foliage, and general character, from the back, or tallest row, to the stone curb or margin; and the vases, with their sparkling little families of beautiful flowers in them, brought up to the eye, have an extremely happy effect.

This truly interesting walk runs in a straight line as far as the range of plant-houses, which are about three hundred feet long, full of a most interesting collection of plants, which we shall afterwards say something about. Passing this range, the walk runs away on a gentle curve line through one of the longest established American propagating grounds in the kingdom, where stands one of the finest standard Magnolia conspicua plants in the country, and now in full bloom. This plant was the first of

its kind that was treated as an out-of-doors plant; and many hundreds of plants now embellishing the proudest gardens of England, are descended from this parent tree. The walk still leads on upon this curved line, through interesting subjects, both in the borders and vases, to its terminus. Here we turn by a classic Grecian vase and pedestal into a cross walk, which leads through yew-hedges to another broad walk, skirting the north-east side of the grounds, upwards of three hundred yards long, and of the same interesting character with respect to a selection of ornamental trees, shrubs, &c. as the centre one. This walk leads one to the east end of the plant-houses, and, beyond them, to the road. In passing this range of plant-houses, we were tempted to run through them, and regret we have not time for minute description. We observed, in our hasty glance, abundance of Camellias, Rhododendrons, Arborea old, Arborea anceps, Azelsas, the eastern kinds in all their variety, hybrid Rhododendrons of every shade of colour, Climatis Sibbaldii, C. grandiflora, Auracaria imbricata, A. excelsa, Berberis tenuifolius, Grosellia robusta, Epæridea, in abundance, Ericæ, Geraniums, and all the other modern plants and flowers.

The collection of evergreens and flowering-shrubs through the quarters, appeared to us as complete as any thing we had ever seen of the kind, and appeared to great advantage from the cross walks connecting themselves with the two main walks before mentioned. In the From Ground we observed a fine collection of coniferous plants, including Cedrus Cleodosa, Abies Webbeona, Pinus excelsa, P. Sabina, P. macrocarpa, P. insignis, Abies Douglassii, Cephalonica, &c. &c., with all the race of Nepal Junipers, Cedar of Goa, Juniperus excelsa, J. expansa, Tournfortea, and every thing new and rare in this way.

In the extensive shop of this establishment, are two circular stages, for plants in flower to stand, and where at all times a selection may be made by purchasers.

What we admired throughout the whole was, the order, regularity, and neatness of the arrangements, having at once consistency of design, accuracy of execution, and system in management.

From the nursery called the Home Ground, and fronting the great west road, we were tempted to visit the Gloucester Road Nursery, of twelve acres, belonging to the same establishment, and which is within a stone's throw of the homested.

This ground has also been completely modernized; and, although dedicated chiefly to other purposes than that of Flora, yet the arrangement afforded us much gratification. The ground lies in a square form, and is bounded on the west by the Gloucester Road; on the south-east by the foot-path leading to Brompton, Chelsea, &c. It presents a perfectly level or table surface; it has been subdivided by walks, six feet in width, from east to west, and from north to south. The entrance walk, opposite to Gloucester Terrace, is twelve feet wide. This intersects the centre walk of the same width. These and all the other walks are intersected by a wide walk, skirting the fences all round, accompanied by a border. This admirable arrangement divides the ground into large square quarters, after the manner of the best north-country arrangement of these matters. These twelve acres are devoted chiefly to fruit trees of the most choice description.

Along the margins of these walks are planted all the select standard Roses in collection, of one height of stem, and at twelve feet apart. The length of these walks, being about three hundred yards, gives ample room. The object of this is to procure cuttings of the true kinds. The edges of these walks are sown with all the choice North-west American annuals for the purpose of raising flower seeds, true to their kinds and in wholesale quantity. Through the quarters, between the rows of fruit trees, are cultivated all the showy and interesting flower seeds, in great breadth. It was certainly a pleasing sight to us, to see so much ground in so high a state of cultivation, and the useful and the ornamental blended so happily together. To persons habituated to look, in the usual way, at a few patches of flowers, this must be a novel sight. The ground here, like the Home Nursery, has been completely renewed by trenching, which seems to have given an exciting influence to every thing within its boundaries. We observe among the floral productions preparing for sowing here, a great breadth of Clintonea pulchella; Bartonea aurea; Clarkea in all its variety; Lupinus nana, and all the others; Colinsea in variety; Gellea; Lemnanthus Douglassii; Nolona; Ænotheras; Coreopsus; Nemophylla; and indeed all the new and interesting ones in this way, that have been introduced to the country. The object of this arrangement is to give these select things true and in quantity.

THE WEATHER FOR APRIL.

THE April which is just now closed, is one of the most singular that ever occurred in Britain, and has partaken less of the character usually ascribed to that month than almost any which the oldest observer can remember. With the exception of a few occasional drops of rain, for we cannot call them even gentle showers, it has been a clear, calm, and tranquil month throughout, partaking more of the repose of a mild autumn, than of the usual turbulence and activity of the last month of the spring. Up to about the middle of the month, the wind blew from the east; and there were, occasionally, pretty severe frosts in the morning. Still, however, the wind had very little of a blighting character, and there was as little that it could blight. Occurring so early, it retarded the bloom, and thus preserved instead of destroying it; neither did it "eat the grass of the fields," as is often said of the east winds in May.

New moon happened on the 16th, at eight o'clock in the evening; and early on the morning of the following day (Good Friday), Cirri, diverging in streaks from the south-west, indicated a change in the upper sky; and soon after, the upper atmosphere descended and obliterated the east winds, replacing it by a south-west one. This change put an end to the frosts, and the days became very warm; while the nights had also a high temperature for the season. The great heat called forth many of the summer animals, which are seldom abroad at so early a time; and as early as the 20th, the nimble lizard (*lacerta agilis*) was seen on the dry commons in as full activity as if it had been midsummer. During the whole month, the sky was made vocal by the blythest song of the sky-lark; and some of the native warblers chaunted a note or two during the earlier part of the month, but it was not till about a week after the change of the wind, that the nightingale broke out in full song, which, however, it did with fully more energy than in the average of years.

Even while the wind continued at east, and there was frost during the nights, the grass and the bursting buds did not appear to sustain nearly so much injury as they do from east winds in ordinary seasons; and when the wind shifted, almost as much impulse was given to vegetation as is usually given by an April shower; and though the progress was not by so violent a start, it was of a surer character; and while we write, every leaf and flower of the season which we have had the opportunity of observing, is in most wholesome growth. The petals are, perhaps, not quite so much expanded as they are in more dripping seasons, but they are more perfect; their colours are clearer; and such as are scented, have the scent more fresh and rich. The flowering-shrubs which have come into bloom, are very rich and beautiful; and such as are to come later, are in a very promising condition.

The facts which we have stated,—and it must be apparent to every one who observes that they are facts,—show that the present season is an anomaly among English seasons as they usually occur, and therefore it becomes a question of interest to the cultivator, whether of flowers or of any thing else, to ascertain the causes of this anomaly. The chief one appears to be, the long continued rains, by which this dry and uniform spring weather was preceded, and which may be said to have continued, with only partial intermissions,

from the season of highest temperature in 1839, to the commencement of the season of growth in 1840. By those rains the soil was kept constantly saturated with humidity, and humidity at a uniform and not very low temperature. This state of the earth must have been highly favourable to the development of the rootlets of plants, the parts of them which come first into action for the seasonal growth, and upon the vigour of which the value of the seasonal product above ground, whether in leaves, in flowers, or in fruit, in a great measure depends. The long continued rains thus laid the foundation for an abundant and a vigorous production during the present year; and there were also circumstances arising out of the same rain, which tended greatly to prevent this underground preparation from being wasted by untimely growths, to be put forth one day and withered the next.

The mode in which the rain operated was this: the extreme moisture of the ground kept up a much greater uniformity of temperature in that lower atmosphere which comes in contact with vegetation than if the ground had been more dry; for, in proportion as the beams of the sun, a current of air from a warmer district, or any other cause, tended to heat and stimulate the plants, an evaporation arose from the moist soil, counteracting this heat, and keeping the buds which had to expand in security within their hybernacula; at the same time that the winter grasses, the winter crops, and the evergreens, were not overworked by vicissitudes of temperature, as they are in variable early springs, when the earth is comparatively dry. Taking all these circumstances together, it is quite apparent that the rain of the former season has contributed not a little to the securing of a safe and plentiful crop of all kinds of produce, and a healthy increase of vegetation during the present one; and the uniform mild temperature which has been carried so far forward into the year, leaves comparatively little to be apprehended from the blight-winds of the east, or the chilling blasts from the north, during the usually perilous month of May; for the influence of the sun is now so great, that northern Europe, and our own mountains and hills, must now be considerably dried, and raised to nearly a uniformity of temperature with those rich and cultivated districts upon which the winds from the places alluded to have so baneful an influence, as long as those places continue humid, or otherwise have a low temperature, as compared with the districts over which the destroying winds blow.

There is only one other point connected with the peculiarity of the season which we shall notice in the mean time, and that is, the vigorous growth which has come on after the change of the wind to the west without any fall of rain. This is easily accounted for, from the advanced and vigorous state of the roots and the humidity of the soil. The latter sends up, along with the nocturnal radiation of heat, a very considerable portion of the vapour of water; and though this is what may be considered an invisible watering to the buds and leaves, it is a kindly and effectual one—more so, indeed, than a watering by heavy showers of rain; for it moistens and nourishes the tender parts of the plants without doing them any injury. Taking it altogether, the season seems highly favourable for every description of plant, and as such, it cannot fail in being profitable to cultivators of all denominations. We shall continue to notice the causes and effects of the peculiarities of weather in the different months, rather than to give a mere register, which can be strictly true only at the place

at which it is kept, and which, therefore, can be better done by every one for his own locality, than by any one attempting to generalize it. The weather is a very important study to all cultivators, and parties interested in plants; and, therefore, we shall take occasion to treat as often and as extensively of its philosophy as our limits will permit—the more so, that it is a subject very open to quackery.

CALENDAR FOR MAY.

The reader will have the kindness to consider the present calendar as a mere skeleton of the subjects which future ones are intended to embrace, and also as a guide to himself if he is disposed to assist us in giving proper extent, interest, and value to this department.

It must be borne in mind, too, that calendars, whether of flowers in bloom, of work to be done, or of any thing else, vary, with situations, with soils, with modes of treatment, and with the characters of different years; so that a plant which is described as blooming most generally in the May of one year, may do so in the June or the April of another.

WILD FLOWERS.

These are, upon the whole, rather backward this year, though they are very promising. Among the principal are the Speedwells (*Veronica*), with their delicate blue flowers, abundant both upon the plains, and to a considerable height upon the hills; the early Grasses, and conspicuous among them the Vernal Grass (*Anthoxanthum odoratum*), which gives so sweet a perfume to hay; the Wild Blue Hyacinths, the Lily of the Valley, and various other bulbous-rooted plants; the common Meadow Saffron; numerous Saxifrages, and Stitchworts; the various wild Ranunculi, or Crowfoots, which are yellow or white, and some of the white ones ornament the pools of water; the Carex or Sedge family, which are very numerous; the various tribes of Willows, with their downy catkins; six or seven species of Orchis; several of the smaller Trefoils; the Cronetbills; the Fumitories; the Broom; most of the Violet tribe; and many of the flowering-shrubs which come later or earlier according to the character of the season.

In future, this and the other departments will be restricted to the more characteristic wild flowers, and some account of their favourite habitats and soils will be given. In fact, the object will be to give an outline of the floral character of the month in so far as it can be represented in few words. For May, this is less essential than for the later months, because all the gay world is in town in May, and the working world in the country too busy for attending much to wild flowers.

BORDER FLOWERS AND SHRUBS.

The herbaceous border flowers which bloom best in May, are those which have some analogy to the wild flowers of the same season. Many of the early bulbs are still in perfection; and the foreign and cultivated members of the Primrose family add great interest to the borders, if judiciously blended with those more highly coloured flowers which are to come later in the season.

Among shrubs requiring mossy soil, the Rhododendrons, the Azelias, the Kalmias, and several analogous ones, make a fine appearance; and as several of these, but more especially the Rhododendrons, admit of being broken into many varieties, they may be diversified without end in their arrangement in the shrubbery, while, judiciously worked, they have a fine appearance as single plants in the border. Some of the foreign Currants, such as the *sanguinea* and *speciosa*, have a splendid appearance, either singly or in combination; though as fruit trees they have no value whatever. The florists' flowers cannot be so well described in the seasons at which they flower, as when we have occasion to treat of the families; because then we can allude to the general habits, the appropriate soils, and the modes of treatment.

FLORISTS' FLOWERS.

For the reason above stated, we leave this section blank for the present month.

STOVE AND GREENHOUSE FLOWERS.

This and the following one, we also leave blank, for the reason stated in the general remark at the beginning of this article.

OPERATIONS IN MAY.

In giving instructions for the many and various operations required at the different seasons, we beg to impress on the minds of our readers the necessity of consulting their own judgment as regards the exact manner and time of executing any occasional work, as general directions frequently require modifying according to localities and circumstances.

GREENHOUSE.

This department requires constant attention at this season. Admit all possible air; water may be given freely—the evening is the best time; now great care should be taken to keep the plants clean—fumigate often; Geranium Calceolarias, &c. will now be coming into bloom—they should have plenty of water—syringe occasionally; cuttings should now be taken of Verbena, Phlox Drummondii, Maurandias, Lophospermum, &c., and the old plants turned out—the cuttings will afford a good succession.

FLOWER GARDEN.

This is a very busy time in the flower garden. Dahlias may now go out, also tender and half-hardy annuals; Picottees, Pinks, Pansies, &c. will require water when the weather is dry; Ranunculi and Anemones must be kept free from weeds. Tulips will require protection from strong winds, rain, and frost; but it is better not to keep the awning over them in fine weather, until the blooms begin to expand. Balsams, Cockscombs, and Amaranths require frequent shifting. The latter end of this month is the best time for planting out all kinds of greenhouse plants, climbers, &c., taking care to protect them from frosts.

We would observe here, the chief beauties of a flower garden are variety and contrast of colour, so that care should be taken to avoid placing two plants of the same or similar colour together, but to have them as opposite as possible. We will take an early opportunity of giving a few hints on this subject.

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COLOURS OF FLOWERS AND THEIR CONTRASTS.

THE beauty of flowers, like that of all other material objects, is composed of the beauty of form and the beauty of colour taken jointly; and the object of the floriculturist is to heighten both of these in the individual flower, to the greatest extent that his art will admit. In as far as form is concerned, the application of his art is comparatively limited; because every flower has a definite form by nature, from which no art can break it. It is true that a single flower may be bred into a double one; but this is accomplished only by the change of the anthers, or parts of fructification, into petals; and no more petals can be obtained in the double flower, than there are petals and anthers in the single one. The principle upon which this change is brought about is a curious as well as a useful one; and, therefore, we shall take an early opportunity of offering a few remarks on it. Still, however, though the cultivator has this power over very many flowers, he cannot materially alter the normal shape of the individual petal; and consequently, the only variety of form, besides an increase of the number of petals, is an alteration of the size of them, to larger or smaller, according as the object may be. This change of size may also be extended to the whole plant; and the Chinese have the art of procuring dwarf trees and shrubs perfectly symmetrical, of any height they desire, and yet perfect plants, not fragments kept under by the operation of the knife. This is a branch of cultivation not so well understood in Europe; and the vast number

of ornamental shrubs which have been introduced into Britain, and the difference of their sizes, and habits of growth, render this branch of the art a matter of minor importance with us.

In endeavouring to obtain new beauties, whether of form or of colour, there is one source of mistake, against which the cultivator must be on his guard. Novelty, as long as it continues to be so, has certain charms which are apt to be mistaken for those of beauty, and a variety of flower, inferior to many already obtained, is often prized merely because it is new, and consequently rare. In principle this is bad taste; and in practice it has the pernicious effect of detracting from, and in so far destroying the perception of real beauty,—a perception which the floriculturist ought to possess in the very highest degree.

It is chiefly, however, to the beauty of colour that the skill of the flower-cultivator should be directed; because it is this that strikes first and most forcibly and deeply the eye of every observer. New colours, or superior colours, or blendings of colour, in the single flower, are chiefly to be obtained by cross impregnation, a subject to which justice cannot be done in a casual observation. We shall, therefore, reserve it also for a future occasion, and proceed to the main subject of our present paper—the effect of contrasts of colour; not in a single flower, but in several flowers when they are grouped together.

Every one who has been in the habit of seeing and admiring collections of flowers, on stages, in beds, in borders, in any growing situations whatsoever, or even in a flower vase or a nosegay, must have noticed that, of two collections of the very same species of flowers, each flower in equal perfection, the *tout ensemble* of the one shall have been far more pleasing to the eye than that of the other; and that, in consequence of some principle of arrangement, which in all probability the arranger could not explain, the individual flowers of the one group appeared much brighter in their colours than those of the other; nor could their identity be believed, until a bloom of each was taken, and laid side by side apart from both collections.

Any one who chooses may verify this by a nosegay of flowers consisting of many varieties of colour in the petals, and many shades of green in the leaves; for, if the same nosegay is taken apart and made up again in many different ways, it shall have a different degree of beauty in each, and it can often be improved

by simply removing a flower or two from one place of the arrangement, and putting them in another. Now as each different arrangement gives a different degree of beauty, there must be some one arrangement which shall give the maximum of beauty, and be in short superior to every other; and this will hold in all collections of flowers, in what situation soever they may be placed. The question then is, to find out, not this arrangement for an individual case, because that will depend upon the flowers to be arranged, but the general principle upon which it depends, and which, well understood, the florist can apply to all cases.

The solution of this problem lies in the doctrine of Complemental Colours; that is, of those separate colours which, if blended together, would make the pure white light of the undecomposed solar beam. Rightly to understand this, we must first take the broadest contrast, namely, absolute light and absolute darkness, or rather the nearest approach to these which we can obtain, for neither light nor darkness is absolute on the surface of the earth. When, however, we take as near an approach as we can, we find that, if we look long at the light, the eyes become pained, and lose their perception, so that we instinctively shade them by the hand or otherwise, and the blackness of darkness, though we find it in places where there would be some light under any other state of our eyes, is exceedingly grateful to us. So also when we have been long in the dark, more especially in such darkness as reigns in a deep coal pit, the light, though a little too strong for our vision, is delightful, and we can take a longer view, and discern minute objects more clearly than we can with similar light under any other circumstances. So also when black and white are brought in juxtaposition, the intensity of both is wonderfully heightened. Nay, with the judicious application of a little black colour, we can contrive to make one piece of the same sheet of white paper appear a great deal whiter than any of the rest. We have only to shade it round with any black colouring matter—as for instance with Indian ink, and let the outer margin of this melt finely into the general white of the paper, and then the spot surrounded by the darkest part of the tint will appear as a bit of intensely white paper laid upon the sheet of the ordinary whiteness. In this way, white flowers may be painted on white paper, by means of black colour; and when this is neatly done, the effect is far more fine and delicate than that obtained by any other method.

Now, the reader will not fail to discover that it is the contrast of the shading with the enclosed spot, and the absence of contrast where the shading blends off into the rest of the paper, which makes the spot appear whiter to the eye than the paper outside the shading, though both are really of the same intensity. This is the principle of contrast in the broadest example of it that can be given; but it applies equally to all colours, not only to the named ones, but to every tint and tone of all their names.

In order thoroughly to understand the matter, and be prepared so to arrange our flowers as to give to each individually, and the *tout ensemble* of the group, the greatest possible beauty, we must bear in mind that the colour, as perceived by us, is not in the flower, but in the light which comes from it to the eye, and the adaptation of the eye to the perception of that light. This adaptation is naturally different in the eyes of different individuals, and in some it is wholly wanting; for we have known individuals most expert in the perception of form, who had no idea whatever of differences of colour in any sense of the word. But supposing that the eye has naturally the usual perception of colour, a property which is essential to the eye of every florist, it will invariably be found that it is fatigued by long observation of any one colour; there is always some other colour which refreshes it, and this is found to be as nearly as possible the complemental colour of the one which fatigued it. Consequently that arrangement of flowers will be best in which colours and their complements are brought together, because in this case each will, from the nature of the eye, impart lustre to the other. We shall in another paper mention the leading colours and their complements.

AZALEÆ.

WITH PORTRAITS DRAWN AND COLOURED FROM NATURE.

BY THOMAS ANSELL.

This family, or sub-family, of beautiful flowering shrubs, belongs to the great class of the heaths, which are so varied in different regions of the world, but which all have the common property of thriving best in a peculiar mould, containing in general a considerable admixture of peat earth.

In the system of Linnæus, they belong to the class Pentandria

and order Monogynia, and in the natural system to the order *Rhodoreæ*. They are nearly allied to Rhododendron, Kalmia, Ledum, and some others, all of which thrive best in bog mould, though not in stagnant water.

Azalea was known to the ancients, though not, perhaps, cultivated as an ornamental plant, but on account of the poisonous or intoxicating quality of the honey which bees extract from its flowers. *A. Pontica*, which grows abundantly on the wild uplands of Asia Minor, is supposed to have, in this way, smitten with disease "the ten thousand" on their memorable retreat from Persia. This property is also common to many of the allied plants. This species was not the first introduced into Britain, for azeleas were introduced from the swamps of North America about the year 1734. *A. nudiflora*, with a variety, and *A. bicolor*, and *A. viscosa*, were the first introduced; and from them, either in America or in Europe, above fifty varieties were obtained. Soon after *A. glauca* and *A. hispida* were introduced; and, as the increased variety, together with the Rhododendrons, Kalmias, Ledums, and others, made fine contrasts, and required a similar soil, they all got the name of American plants, and this is popularly continued, although plants of similar appearance have been obtained from other parts of the world. There is, however, a difference in them, according to the Linnæan system; and this is the reason why, in the natural system, they are all included in the order *Ericideæ*.

A. Pontica, which has a splendid yellow flower, and of which there are several varieties, was introduced from Greece in 1793; and soon afterwards *A. Indica* and *A. Sinensis* were introduced from China, and *A. calendulaceæ* from America. The crosses of so many stocks have produced an endless number of varieties, especially under the care of the Dutch and Belgian cultivators, by whom this department of the art is remarkably well understood.

All the varieties of these plants, and indeed the whole order to which they belong, require to be propagated and grown in peat earth, or very sandy loam, though they also grow well in a mixture of white sand and leaf mould. They are easily propagated from seeds, or by layers, and some of them also by cuttings, if these are taken at the right time; but layers and seeds are chiefly to be depended upon. The Chinese species and varieties require shelter in a cold pit during winter; but they should be taken into the greenhouse in February or March, in order to perfect their flowers.

AZALEA INDICA CANDIDISSIMUM MAXIMUM, represented in our present illustration, is a seedling produced from the beautiful and well-known variety, *A. Phœnicia*, the habit of which it very much resembles. It bears a profusion of the most delicately pure white flowers, of much larger size than those of any other variety yet produced; it has a fine evergreen foliage, is regarded as a great improvement on the white varieties of Azalea, and cannot fail in being a splendid addition to every collection.

AZALEA INDICA CÆRULESCENS, the second variety figured in the plate, though not equal to the first, is still a very fine flower. It is a seedling, bearing a strong resemblance to *A. purpurea*, but it is a much more profuse bloomer. As the trivial name imports, the colour is a bluish purple, very distinct from that of any other variety.

The soil most congenial to the growth of these plants, and indeed of all the Azaleæ generally which are grown in pots, is a compost of peat, loam, and fine sharp sand. Being obtained in part from the oriental varieties, they are not adapted for standing permanently in the open air; but for the greenhouse, the pit, or the frame, they may be considered very hardy plants; and, when grown in the above-mentioned compost, and with due attention paid to watering, potting, and other necessary operations, they become worthy to be classed among the most beautiful flowering shrubs that are cultivated. These, and all the oriental varieties, and most of the hybrids obtained from them, belong to the Heptandria Monogynia of the Linnæan system, and not to Pentandria Monogynia; but, as fertile hybrids are obtained from crosses between plants, of both Linnæan forms, it shows clearly that the number of anthers, instead of being a proper foundation for the distinction of classes, is not even a specific distinction in the proper acceptation of the term. This is one, among others, of the many proofs that the Linnæan system conduces little to the true knowledge of plants, and helps to explain the reason why vegetable physiology was so uncertain, and in such a languishing state, during the time when the sexual system was all-dominant. This might have been expected as the result of a system founded upon single characters, the differences of which are probably very trivial.

T. A.

Camden Nursery, May 1840.

SHORT NOTES ON FLOWERS.

BY JAMES MAIN, F.L.S.

CHINESE PRIMROSE.—A Chinese primula has been, within the last twenty years, added to our collections, and is well worthy cultivation, not only because it is easily kept, but because by a little heat it may be made to flower any time in the winter It is the *Primula prœnitens* of authors, and already two or three varieties have been obtained from it by seed.

THE LILY.—The Lily *(Lilium)* is the name of a pretty extensive family of ornamental plants universally cultivated. The white lily *(L. candidum)* is, except the peony and sunflower perhaps, one of the most conspicuous of our flowers. Its large, scaly bulb, and strong upright stem, bearing a short spike of large, diverging, odorous blossoms, not unlike the regal ornament called a sceptre, are most attractive; and as it is, though a native of Greece, perfectly hardy, neither impatient under frost, nor nice as to either soil or situation, it is as frequently seen in the cottage as in the palace garden. Its congener, the common orange lily *(L. bulbiferum)*, is also a conspicuous object; and the curious manner in which it produces deciduous progeny in the axils of the leaves, like some others of the genus, is remarkable. That species called the tiger, from its spotted petals, is also a common favourite; and among twenty-four others, all hardy bulbous plants, there are many notable beauties, especially among those called martagons. They all succeed well in a free, rich soil. Some of the North American sorts, as the *L. Carolinianum*, *L. superbum*, and *L. Canadense*, require a considerable portion of peat earth to grow in. The six anthers, and single exserted style of the blossoms, indicate at once that the lily belongs to the sixth class and first order of Linnæan botany, and to the natural order *Tulipaceæ*.

FRITILLARY.—Fritillary *(Fritillaria)* is a nearly allied genus to the lilies; similar in root, stem, and form of flowers, though not in the position of the latter. The oldest—that is, the first introduced species, are called *Crown Imperials*, from the circumstance of their bearing a tuft, or crest of leaves, above the flowers, which latter hang like bells beneath. They are generally natives of Asia; a few are American, and one is found in Britain, namely,

the chequered or Guinea-fowl tulip (*F. meleagris*). Where collections of them are cultivated, they are usually placed in beds of sandy loam, or any light garden soil, by themselves; or they are dotted about in the flower borders, where they may be best seen. They are increased by offsets, and only require to be occasionally transplanted.

The African Lily (*Agapanthus umbellatus*).—This fine ornamental plant, though usually considered a denizen of the greenhouse, is yet so nearly hardy that we often see it flowering beautifully in the cottage window, so that a very slight winter protection is sufficient. Loam, enriched with a little rotten dung, is the compost in which it thrives best, and it is easily increased by dividing the root, or by seed, which is sometimes produced. There are three species. The flowers are bright blue and hexandrious, and the plant belongs to *Hemerocallidaceæ*.

Day Lily (*Hemerocallis*), so called from the fugitive character of the flowers, which rarely last longer than one day, though there are a succession of them borne on the same stem. The colours of the flowers are not brilliant, and the flag-like appearance of the leaves renders the plant fit only for a shrubbery. This genus gives a title to a pretty large natural order, viz. *Hemerocallidaceæ*, which includes many fine exotic plants; among the rest, the extensive genus aloe.

A new genus, separated from Hemerocallis, called *Funkia*, natives of China, is hardy enough to stand in our open borders. There are two species, *F. subcordata* and *F. ovata*: the first has white flowers, appearing but seldom; the second has purplish-blue flowers, and blooms freely. It has been suggested, that if the root of the white one was taken out of the ground, and dried for a month before it is planted again on a warm situation, this would probably throw it into flower.

The Iris.—This is one of the most gaudy of our border flowers, and as remarkable for its curious and elegant figure as it is for its brilliancy of tints. There are above four score species, natives of every zone of the earth's surface in the northern hemisphere. Many are natives of the bleak regions of Siberia; a few are Persian, five are North American, three are British, and numbers are from central Europe. They are generally fleshy-rooted, and some few are bulbous; both pretty easy of culture and of increase by division. They mostly affect a sandy soil; and some, as the

I. Persica, *I. alata*, *I. Caucasica*, and *I. reticulata*, require an addition of sand and peat earth.

The *I. Susiana*, a native of Greece, is one of the oddest coloured flowers in nature; it can only be compared to the lurid markings on the belly of a toad, or back of a viper, and is withal one of the largest petalled of the tribe. A collection of Irises is always an interesting feature in a flower garden, as there is constantly one or other of them in blossom throughout the season.

The Iris belongs to the third class *(Triandria)* and first order *(Monogynia)* of the sexual system of botany, and to the natural order *Iridaceæ*.

Corn Flag *(Gladiolus)* is a beautiful genus of ornamental plants, belonging to the third class and first order of Linnæan botany, and to the natural order *Iridaceæ*. They are tuberous-rooted, and their spikes of flowers are very beautiful. By far the greater number of the species, of which there are thirty-seven in all, are natives of the Cape of Good Hope, and are usually kept in pots and in frames. The European species are quite hardy, and do well in our flower borders; but where collections are kept, if not in frames, the bulbs or tubers are planted in beds of light sandy soil, on a south border, early in spring, and are taken up in the autumn, and kept dry, like other bulbs, during winter. It is said that if the tubers are planted deep, say six or eight inches, they will, with a very slight covering in hard frosts, survive the winter, and flower well in the summer.

Lobelia is an extensive family of flowering plants, some of which enrich our flower borders in the summer months. Among them some are shrubby, some are annuals; but most of them are herbaceous perennials, and natives of every quarter of the world. The *L. cardinalis*, *L. siphilitica*, are well known border flowers, and there are several others equally interesting. They are propagated by seed and suckers, which should be taken off in the autumn, and planted in rich light soil. Some of them require the shelter of a frame in winter; and others, which are rather tender, receive greenhouse treatment.

Bell Flower *(Campanula)*.—This very conspicuous genus has long attracted the notice of florists, some of the species having been introduced into our gardens as far back as 1506. Canterbury bells are mentioned in every old book on gardening; and this species, and also many others, are still valued as highly

ornamental objects. The *C. Persicifolia* and its six varieties, differing in form and colour of the flowers, are in every garden. The *C. pyramidalis* is an universal favourite, and, when properly managed, becomes a magnificent object of beauty. The culture is rather tedious, but the result is highly satisfactory. Seeds are sown, about the beginning of May, on light soil, in a warm situation and under a handglass. As the seedlings rise, they must be allowed air, increasing it gradually, and must not be allowed to get dry. When about one inch high, they are transplanted into a bed prepared for them by taking out one foot in depth of the natural soil, and filling it with four inches of good rotten dung in the bottom, and making up with good light soil. Transplant, without damaging the roots, at six inches apart, and cover the surface with an inch of rotten dung, to keep the roots moist. Besides this, the plants must be supplied with manured water occasionally. By autumn they will be strong. During winter they must be protected from hard frost by having dry fern or loose straw thrown over, but not so as to break the leaves. In March following examine the plants, and if any present a flower stem, the plant should be carefully taken up : have the stem cut off, leaving only a few buds to the crown, and replanted. During summer the plants must be liberally supplied with dung-water, and the consequence will be very strong plants in the autumn. When done growing in October, the ground among the plants should be covered with old bark saw-dust or coal-ashes, but not so as to cover the points of the shoots ; and in severe frosts cover as before.

In the third year, before they start into growth, they should be taken up with good balls, and either placed in large pots or planted in the flower-garden, enriching each station with good dung, where they will be most ornamental. Here the plants will form a pyramid nine feet high, and covered with flowers from top to bottom. Sometimes this campanula is trained upon a light frame of wood (they all require props) by cottagers, and really looks very beautiful, and even fit to embellish the finest drawing-room. The little bell-flower (*C. rotundifolia*), so often seen on dry heaths and commons, is also made a cottage-window ornament by keeping it in pots with the white flowering variety, either intermixed or separate. Among a good many others which are natives of Britain, one has been introduced into the kitchen garden as a culinary vegetable, namely, the Rampion (*C. rapun-*

culus), the long roots of which are used like scorzonera: it is not, however, much cultivated.

The genus campanula is extensive, containing above one hundred and twenty-eight species, with numerous varieties; but it was formerly much more numerous; for Fischer, L'Héritier, and other modern botanists, have withdrawn from the genus campanula two other genera, viz., *Adenophora* and *Prismatocarpus*, which were before considered to be campanulas, and consequently arranged therewith. The well-known little flower-garden annual, called Venus's Looking-Glass, is now called *Prismatocarpus speculum*, instead of its old name, *Campanula speculum*. They are all easily propagated by seeds, or division of the roots.

GENTIAN (*Gentiana*).—An interesting family of dwarf-growing ornamental plants, few of them exceeding two inches high, and yet bearing very large flowers, as compared with the bulk or stature of the entire plant. The flowers are chiefly blue, though some are yellow, and some of the varieties are light blue or white. They belong to the fifth, or pentandrious class of Linnæus, and they give a title to the natural order *Gentianeæ*. They are natives of the Alpine countries of Europe, the north of Asia, and America; and though they are in general hardy, they are best preserved in pots, and having the shelter of a glazed frame in winter. The finest flowering species are planted in beds of light rich soil; or in peat-earth, in which most of them do well. Sometimes they are planted as edgings to beds or borders; and, however disposed, look better in groups or masses, than when dotted about singly. They may be increased by seed, which they produce abundantly, and which should be sown as soon as ripe; for if kept over the winter, they rise slowly, and most of them not till the second year.

ÆNOTHERA.—A very extensive genus of annual, biennial, and perennial herbaceous plants, one species of which has been long known as the Evening Primrose. They are rambling growers; but some of their flowers are large and handsome, and very suitable for the borders of the flower garden. A new genus has been lately taken from among them, including most of the annual species, called *Godetia*, some of which are party-coloured, and highly ornamental. The *Godetia Lindleyana* is universally admired, and several others are no less interesting to the lover of flowers.

PÆONY (*Pæonia*).—An herbaceous and half shrubby genus of tuberous-rooted plants, remarkable for their magnificent crimson

flowers. The most common one (*P. officinalis*) was introduced from Switzerland, as well for its medicinal properties as for its beauty, as long ago as 1548; but it is only since 1784 that a rather numerous influx of the white-flowered and nine of its varieties have been introduced from Siberia; and many more varieties have been received from Greece, and the south of Europe. All these are herbaceous, and are commonly grown together in beds of good rich soil.

Chinese travellers gave glowing accounts of the *Tree-pæony*, which was common in that empire, and by the exertions of the late Sir Joseph Banks and others, a few of the shrubby species (*P. moutan*) were obtained from Canton, together with a few new herbaceous varieties, soon after 1790.

The moutan (moutan is the Chinese name of the plant, and used by us as the specific distinction,) is only a half-shrubby, and half-hardy species. If planted in the open ground it requires some kind of winter covering; and if kept in pots, these should be placed in pits during the cold season, and brought into the greenhouse or conservatory in February or March, to produce their fine flowers. The moutan has purple flowers; but we have four varieties,—white, and purple, and two with pink-coloured blossoms. The Chinese florists boast of having many different coloured sorts: yellow we are pretty well assured they have; but they assert they have also *double blue* ones, and remarkably double, having one thousand or more petals; but it is probable these will turn out to be herbaceous species, or only varieties.

The P. moutan may be propagated by cuttings, or by layers; and, by the latter plan, if the whole shoot has an incision made above and below each bud, and is laid flat on the surface of light sandy compost, shoots furnished with roots will rise from the incisions, and be soon separable into distinct plants. They may also be increased by grafting them on the roots of each other.

VISITS TO NURSERIES. No. II.

MR. GROOM'S FLORAL NURSERY, WALWORTH.

Every one who admires those lovely children of Flora which this eminent florist has chosen specially to adopt, and to tend with so much talent and success, must know both the way to his

establishment, and what is to be seen there, without any pilotage of ours. But, in this flower-loving age, there are many who visit the metropolis only by snatches of time, and who are so much engaged in other matters, that they have no leisure for hunting out such floral beauties as they desire to possess. For their use chiefly, therefore, we shall continue our visits to the leading establishments, noting what is more especially attractive in each, in the fond hope that our notes may be as welcome to others, as the visits are delightful to ourselves.

Fair Flora is, however, a mother so prolific, that no one man can adopt the whole, or even the major part of her lovely children, and at the same time do justice to them in the way of that education of which they are so susceptible, and by which they are so much improved. Indeed, it may be said that, in every case, a "florist's flower" is, in a great measure, a product of art, only that the art has a living subject upon which to operate; and such being the case, if the hand of art is allowed much to slacken, and more especially if it is altogether withdrawn, the flower has a tendency to revert back again to what it is in wild nature.

In remote parts of the country—and there is none so remote as that the love of flowers has not reached it, the professional florist, who supplies those around him, must grow a little of every thing that is in demand; and by this distraction of his attention, it is not possible that he can do that justice to any single species which can be done by one, the objects of whose attention are less numerous. No doubt there are, in the country, men who have deservedly acquired name and eminence, in consequence of which they can draw customers from afar, and such may make their election of what they are to cultivate, and what not. Such however are, and must remain the exceptions, and not the rule. It is only in a great place like London, that the proper division of study and labour in this profession is practicable; and the interest both of the professor and of the art points out the cultivation of a moderate number of special favourites, and the cultivating of them with a view to every improvement of which they are, or can be made, susceptible. This is a work of much observation, study, and experience; and he who wishes to be eminent in it, ought not to have his attention divided by any other subject; and such is the love of fine flowers, that no judicious cultivator of them need go without an ample reward.

When we speak of the "cultivation" of flowers, the term must not be confounded with the cultivation of plants,—not even of the plants which produce the flowers; for the cultivation of plants is merely the cultivation of individuals belonging to varieties which already exist; whereas the proper object of the cultivator of flowers is, the obtaining of new varieties; and this is done by hybridization, or cross impregnation between different varieties of the same species. Upon another occasion we shall offer some remarks on the *rationale* of this process, the means of performing it, and the probable results; and so, in the mean time, we shall only say that it is easily done by any one who possesses varieties of a species which perfects seeds in this country; and that, if the practice of it were general, new and beautiful varieties of all species of flowers might be greatly multiplied, by the pleasurable amusement of a very few leisure hours. But we may seem to be forgetting Mr. Groom, though, as he has been eminently successful in this operation, it is difficult to think of him, without at the same time thinking of it.

Upon entering Mr. Groom's grounds, the first thing that strikes one, is the tact with which they are laid out, so that the attention of the visitor may be allowed to concentrate itself upon the flowers. There are a few plants in the apartment towards the street, which tell the eyes of the initiated that there must be something worth viewing within; but there, and especially in the grounds themselves, there is nothing to attract the vulgar gaze. The *bijouterie* of artificial ornament may be all very well in mixed gardens, where idlers go to lounge; but in the grounds of a genuine floriculturist it would be wofully out of place. Mr. Groom appears to understand this well, and he acts upon it; and therefore, beautiful as his flowers are, not a jot of the effect of their beauty is lost by anything else that can distract the attention.

One of the flowers which Mr. G. cultivates with the greatest assiduity and success, is the tulip, and every season rewards his skill and industry with new beauties of first-rate excellence. In the season of bloom, his collection is a great optical treat. The choicest ones, which have come to full size and perfection, are arranged in an ample bed, duly shaded from the sun and the weather. The younger ones are in smaller beds; and among them there are equally choice varieties, though not so large in the cups as the full-grown nobles of the collection. Besides these, a

very considerable breadth in the open air is also covered with full blown tulips; and it is scarcely possible to imagine a finer sight than these; for, though almost all their beauty is the work of art, they are so disposed, that the whole appears to be the simple result of nature. In all the almost countless array, we did not observe a single bad or degenerated flower, nor one which in ordinary collections would not be reckoned a beauty.

Now, considering the many points which are essential to a first-rate tulip, such as the proportion of the stem and cup, so that the plant may neither seem dwarfed or lanky; the purity of the colours, and the force and harmony of their blending; the symmetrical form of the cup; the breaking of the colours on the proper part of the petals; the shape of the feather, and the perfect purity of the bottom of the cup,—considering these and others, and the numerous shades of perfection of which they all admit,—bearing in mind that each and all of them must be diligently worked for, not casually found out,—and remembering also that one element of admiration is the labour which the thing admired costs us,—we must admit that the breeding of a perfect tulip is a work of much skill and attention, and may cease to wonder that tulip fanciers should often pay very high prices for favourite flowers.

And it is well for the floricultural art, the general distribution of flowers, and all the good effects with which the love and culture of them is attended, that there are those who are able and willing to pay these high prices. The study, the labour, and the cost of obtaining an extensive and fine collection, are more than those who have not examined the subject would be apt to suppose; and were it not for the encouragement given by wealthy purchasers, the profession could not exist; and there would be no fine flowers except such as were cooped up in the private gardens of a few amateurs; but, in consequence of this encouragement, the very finest varieties soon find their way to the public generally at a very moderate cost. The fashionable will have novelty as well as beauty, and this keeps the professional florist on the alert for something new; while the old varieties, often equally beautiful, get into the possession of the public generally. Thus, while the wealthy are patronizing the professional florist, they are taking the sure means of distributing beauty over the gardens of cottagers, and inspiring those cottagers with all the beneficial moral effects which the love of beauty so certainly produces. These remarks

have been suggested by Mr. Groom's tulips, but they are equally applicable to every department of floriculture.

Though Mr. Groom excels in tulips, they are not the only flowers which have profited by his skill and attention. His collections of anemonies and ranunculi are extensive and choice; his pelargoniums are also very superior; and some seedlings, flowered for the first time this year, are ample in their blooms, and exquisite in their colours. The more splendid of the lily tribe, and the amaryllis and calceolaria, together with a number of others, have been objects of his attention, and he is in possession of numerous hybrids of first-rate quality. A visit to such a nursery is a means of great enjoyment to every person of taste, and it has this advantage, that the flowers address themselves to the understanding as well as to the eye; for one cannot contemplate them for any length of time without thinking of the art by which they have been brought to their present perfection, and also of that exquisite adaptation of their natures to the art which is applied to them. Indeed, we know of few means of spending a leisure hour more pleasurably, and with more mental profit, than a visit to a collection of flowers, made with a view of understanding as well as seeing them; and we may add, that for this purpose no collection can be better adapted than that of Mr. Groom, and no florist can be more able or willing to give his visitors every reasonable information. This, however, is not quite enough; for the grand object never to be lost sight of in viewing a collection, is to increase the number and heighten the beauties of the flowers in the collection at home.

ON THE CULTURE OF THE ABUTILON STRIATUM,

BY R. PLANT.

Among the many, and, in some instances, very beautiful additions made to our catalogue of plants, within the last few years, this one is certainly destined to maintain a high place. It is a native of the southern part of Brazil, having been found on the Organ Mountains, by Mr. Gardner, and also the Rio Negro, in the Banda Oriental, by Mr. Tweedie.

As it is now becoming pretty well known, and will, doubtless, be in the hands of many this season, I am induced to offer a

remarks on the culture, having grown it with considerable success.

Cuttings of young wood, taken off when about three inches in length, will strike readily in a mixture of sand and peat, or leaf mould, covered with a small glass, and plunged in a gentle bottom heat. When the cuttings are struck, which may be known by their beginning to grow, pot them off into small pots (60's), using a mixture of peat and leaf mould, in about equal parts, with a little sand; let them remain in a gentle hot-bed, or some warm place, for a week or ten days, watering them gently as they may require it; then remove them to the greenhouse, and as soon as the roots have filled the pots, shift them into a size larger, with the same compost, adding a little loam, which should be increased at each shifting, until they are placed in large pots, by which time they will be at least four or five feet high, if attended to, and bearing a profusion of bloom, which, from its pendulous habit amid the ample foliage, is extremely beautiful. As the season advances, they may be removed out of doors with other greenhouse plants, where they will continue in flower the whole of the summer.

In the Autumn they should be re-potted with the other plants, cutting off the matted roots, and filling up with good fresh earth, in the same proportions as before, and placed in the stove, if there is one on the establishment, where they will still continue to bloom; thus amply repaying the trouble and attention bestowed on them, by a continual succession of curious and very handsome flowers.

R. P.

Rectory Place, Fulham.

'The Botanist' relates the following interesting particulars of this genus;—The genus Sida, from which Abutilon has been separated, comprises, if we include Bastardia, Gaya, and Abutilon, (as is still done by De Candolle and others,) about two hundred species, many of which are accustomed to unfold their flowers at such stated hours, that Bory de St. Vincent asserts, that from the single genus Sida, a dial of flowers *(horologium florœ)* might be constructed, so accurate that, between the tropics, the hour of the day might be ascertained by it.

The leaves of some of the species exhibit perceptible changes

of position; those, for example, of the Sida Abutilon (Linnæus) fall close to the stem, and seem to protect it from the night air. A similar action may be observed even during the day in the large leaves of the *Hedysarum (Desmodium) gyrans;* for, should dark clouds suddenly overspread the sky, they will immediately fall down, and cover the stem as with a mantle.

THE WEATHER FOR MAY.

THAT peculiarity of the weather, during the latter half of the past year, and all that has elapsed of the present one, which gave to April a character so different from what that most variable of all months in the calendar usually possesses, has had nearly similar influence upon the weather in May. Alternate sunshine and showers, with more or less of thunder and hail, are the ordinary characters of April, even to a proverb; and, although those parts of England which are exposed to the winds from the bleak region that lies immediately south of the Baltic, and upon which the first effect of the returning sun is to increase the cold, by evaporating the water on the swamps, are often blighted by the east winds of May; yet there usually are, in that month, alternations of what is termed "fine growing weather,"—that is, gentle showers, with gleams of bright and warm sunshine between.

But the April of 1840 was just as unlike what we are accustomed to look upon as an April as can well be imagined; for, with the exception of some showers in the early part of the month,—and these had more the character of winter showers than of spring ones,—the sky was untroubled throughout the month, and generally speaking, cloudless. As April was, thus, not an ordinary April, we could not expect an ordinary May; for, as in all other matters, so in the weather, our only rational means of anticipating what is likely to be the future, is a careful study of the past. In the weather, this is more difficult than in the case of almost any other subject; because the elements are exceedingly numerous, and some of them are very obscure. This, by the way, is the reason why people, who are shrewd enough in most matters, readily become the dupes of every quack, in that of the weather.

The extreme saturation of the soil by the rains of the preceding season, not only nourished the roots of every plant which had "got hold of the ground," but diffused what may, from its effects, be called "an underground rain,"—a watering *ex humum* to the leaves and heads. This arose from the evaporation of the moisture escaping from the earth; though, as generally speaking, the temperature of the whole twenty-four hours was much more uniform than it usually is at the same season. While this evaporation moistened the vegetation, instead of drying and parching it, as is the case with the ordinary bleak winds in May, yet, up to the time when the rain came, the drought had not penetrated more than two or three inches into average soils, where exposed, while the meadows and corn fields, where the clay was covered, remained quite moist.

In consequence of this, ordinary vegetation came on as well as if the season had been one of occasional showers. Indeed, it came on better; for the plants whose roots were in the moisture had, so to speak, "nothing to do but to grow;" whereas, in ordinary seasons, they have to contend with the storms, must pause till these are over, and the pause is often so long, as not only to retard, but in a great measure to impair the growth of the year.

With the out-door florist, the case was not so favourable. Those annuals which require the seeds to be buried at a less depth than that to which the drought had penetrated, failed in many instances, partly by the seeds being parched just as they germinated, and partly from the length of time that they were exposed to the ravages of birds; and where they have come up after the showers, they are in general very unequal, and in patches. Thus the annual ornaments of the bed and the border will be thrown later in the season than usual, and their beauty will be impaired.

The same cause is unfavourable to many of the perennial herbaceous flowers;—to the anemone and ranunculus, for instance, especially the latter, of which the blooms, even in the best-conducted collections, promise to be but few in number, and small in size. Speaking theoretically, we should be inclined to say, that a uniform growth, without any checks, is unfavourable to the flowering of all plants which are natives, or naturalized in, variable climates. Flowering is the result of a sort of check upon what may be termed the "personal" vegetation of the plant, being the final effort of that part upon which the flower of a perennial plant grows, and of the whole plant in the case of an annual,—it being understood of course, that flowering includes the perfecting of seeds, which is the purpose of nature in the production of every flower. But the relations between seasons and flowering have not been investigated with that care which they deserve.

May set in with the same cloudless atmosphere which had been so prevalent in April, and the first days were particularly hot and dry, under the direct rays of the sun, although the cool and soft air, under the shade, especially of trees, showed that there was still much humidity rising in vapour from the earth; and this was further confirmed by the perfect freshness of the leaves, even when the influence of the sun was greatest.

This moistness of the earth, and dispersion of moisture through the lower atmosphere, preserved the electric equilibrium (as it is called) between the two, and showed that, if the coming of the rain was not protracted for a considerable time longer, it would come mildly, and be accompanied by very little lightning and thunder.

It was new moon at twelve at night on the 1st, and so, if there was to be a change in the weather, the time of it, according to expectation, in ordinary cases, would have been about the 3d or 4th. There were some indications even earlier than that, in the appearance of light flocculent cirri, ranging from south-west to north-east; but these were so lofty as to be above much influence of the reflected and radiated heat of the earth, and as they attempted to descend, they melted away. Meanwhile the surface wind was "trying for a point," and the upper current from south-west blew very gently; so that, altogether, there were none of the elements of a storm in the atmosphere, and the signs of rain were few and faint; the most continuous being increased

moistness on the shaded sides of ditches, showing diminished tension and evaporative power in the atmosphere.

This state of things continued for several days, the cirri forming during the day, and clearing off during the night,—only they gradually formed lower and lower in the air, and at last, passed into light cirro-cumuli. The first rain was a gentle trickling, but it was soon followed by a pretty heavy shower; and there were some violent showers, with hail in some situations, but not in such quantity as to do much damage; and though there was some thunder, there was not much.

These rains gave a general washing to the vegetation; but they were not followed by that genial warmth and rapidity of growth which usually follow May showers, and not unfrequently April ones. On the contrary, the wind, at least in the vicinity of the metropolis, remained in the north-east quadrant of the horizon; and, although it had none of the characters of a blighting wind, it was hard and cold; and vegetation did not make much more progress under its influence than it had done under that of the dry weather which preceded. Seeds which had not previously been moistened, sprung up, but there was no seasonal epoch of any marked character. Indeed, up to the very moment at which we write, the cold which has followed the showers has been less favourable to vegetation than the drought was; and it is not a little remarkable, or at all events out of the general course, that rain, which in the time of its coming was what we would call so seasonable, should have had so little beneficial influence upon vegetation.

But though unusual, the cause of this is easily explained; for the general saturation of the earth with moisture explains the whole. Moist earth is a very bad conductor of heat, not only on account of that which is absorbed in the process of evaporation, but also in the passage through its own substance. Thus, during the day, the evaporation at the surface, in a great measure neutralizes the influence of the sun, while the humidity prevents that influence from penetrating the mass of the earth, which it does when that mass is dry, and then radiates, and so warms the atmosphere during the night. Weakened by the surface evaporation, the sunbeams of May, 1840, have been feeble and comparatively effectless; and deprived of the usual radiation of heat from the earth, the nights have been chilly,—and they may continue so much further into the season. That this will affect many flowers, and, among others, the Dahlia, is very obvious; but the effect there will be less severe than upon those culinary vegetables which work much under ground; and the market gardeners are now complaining as much of the scanty crop of asparagus, as they did of that of radishes during the drought.

To such as know or care no more about the weather than to notice it as it passes, and grumble at it for not being exactly what they wish, these remarks may seem tedious; but the subject is one of deep interest to every one who cultivates, or who makes a profit, or lives on what is cultivated; and the present season gives scope for a little insight into the true philosophy of the matter.

Heat and moisture are the two grand stimuli to vegetation; and there is a certain balance of these, discoverable only by observation, which is best suited for each different climate, soil, situation, and plant. Where humidity is in excess, there is a tendency to uniformity of temperature, for the same reason

that the temperature of the sea is far more uniform than that of the land. The present spring set in with a great excess of temperature in the soil; and while the heat of the sun was below the average of the year, this worked well with it. But when the solar heat became above the average,—which is a little after the vernal equinox, whatever be the condition of the earth,—the excess of humidity impaired its action; and the soil of England must be further dried before the summer sun can have the most beneficial effect upon it. We must, therefore, postpone the remainder of our remarks, and deductions from these remarks, until we make some observations on the weather for June; but we may hint that the evil—in so far as it is an evil, is in the earth, and not in the atmosphere; and therefore it is not to be removed by thunder-showers, hail-storms, or any of those atmospheric phenomena, which, in ordinary seasons, are said to "clear the air."

About the 22d of the month, the wind began to veer round by north to north-west, but still blowing hard and cold; but by the 24th it had gained nearly the west point, and clouds collected, while the wind blew strongly; and, according to the common saying, it "blew through rain." In the latter part of that day a considerable quantity of rain fell; and it has since continued showering, with only occasional glances of sunshine. This rain has had a much more beneficial effect on vegetation than that which fell earlier in the month; and the stems and leaves have made considerable progress. Many of the annual flowers, too, and other small seeds, which had lain dormant in the ground during the dry weather, and which seemed to be but little stimulated by the previous rain, now began to spring up; and, altogether, the gardens put on a more kindly aspect. Still, however, the moisture in the ground, the falling showers, and the want of sun, cannot fail to have unfavourable effects upon flowering; nor can we expect that either annuals or perennials, in the open borders, will have so good an appearance as if the season had been such as to bring them up earlier. This year, indeed, in as far as the weather is concerned, April and May appear to have changed places with each other, so that the season and the earth do not exactly harmonize in their working. In consequence of this, we cannot, from the experience of former years, come to any definite conclusion as to what shall be the character of June and the succeeding months; hence, we must just notice them as they come, and record our notices, as a guide, should a similar season again occur.

CALENDAR FOR JUNE.

STOVE AND GREENHOUSE FLOWERS.

Stove.—Begin to dry off those bulbs of Amaryllis, Antholyza, Tyia, &c., that have bloomed early in the spring. Gesnerias coming into flower should have a good supply of water. Syringe them over every day until the flowers open. Triverania should now be potted singly in 48's pots, and brought forward in the stove. It will be necessary to look over the plants with the watering-pot twice a day. Give air whenever the day is warm—fire may now be dispensed with.

If an awning is fixed over the roof of the stove, it will save a deal of time and trouble in watering, and the flowers produced will be much finer than when exposed to the scorching effects of a midsummer sun.

GREENHOUSE.—Those plants intended to stand out of doors during summer may now be removed. Cuttings of Chrysanthemums, struck early in the month, make dwarf plants, and flower well. Gloxinias should be watered over the whole foliage until the blossoms expand. Climbers require constant attention to keep them neat. Tie them up as they grow, or it frequently happens a fine plant becomes injured, or entirely spoiled, by neglect. Great care is necessary in attending to Ericas at this season, for, if they once get dry, it is impossible to recover them: a moderate quantity of water applied often is best. Cuttings strike well now; also Azaleas. Calceolarias should be impregnated as the flowers arrive at perfection: where new varieties are desired, give all the air possible.

FLOWER GARDEN.

Finish planting out as soon as possible, for, if deferred, the increasing strength of the sun is very prejudicial to recently removed plants.

Take the covering off Tulips: if seed is intended to be saved, fix a piece of glass horizontally over each pod. Pansies should now be propagated: this not only improves the plants for blooming in the Autumn, but the cuttings will be strong plants for the Spring.

Ranunculus should be covered as soon as the bloom begins to open.

Tie up Carnations, Pinks, Dahlias, &c. The choice kinds of Carnations, Picottees, and Pinks, should be shaded.

FLORAL INTELLIGENCE.

HORTICULTURAL SOCIETY.—The first fête of this society was held in their grounds, at Turnham Green, on Saturday, the 16th. A fête is not exactly the occasion upon which to ascertain with accuracy what the society possess, or what they do; and therefore, we shall take an opportunity of visiting the gardens when they have no attractions save their own vegetable contents. On their fête-days, one's eyes are so much dazzled by ladies and lords, and gems, plumes, and stars, and one's ears so much assailed by "gong-peal and cymbal-clank," and all the other discords of delightful music, that one has no attention left to bestow on a flower. The fête, however, "came off" well in quality of visitors, though the rainy morning made the quantity a little deficient. There were a good many lords there, and, of course, many ladies. Many of the flowers, especially the Orchidaceæ, the Cacteæ, and the Pelargoniums, were very fine. Besides many silver medals, gold ones, for ornamental shrubs and flowers, were awarded as follows:—

For the large collection of stove and greenhouse plants — the gold Knightian medal, Mr. Green; the gold Banksian, Mrs. Lawrence. For the small collection — the gold Banksian, Mr. Barnes. For thirty species of Cape Heaths—the gold Knightian, Mr. W. Barnes; the new gold Knightian, Mr. Pamplin. For six species of Cape Heaths — the new gold Banksian, Messrs. Lucombe. For Pelargoniums—the gold Banksian, Mr. Cock; the new gold Banksian, Mr. Gaines. For exotic Orchidaceæ—the gold Knightian,

Mr. Mylan; the new gold Knightian, Mr. Rollison; the gold Banksian, Mr. Durnsford. For a new species of Rhododendron — the gold Banksian, Mr. Smith. For greenhouse Azaleas—the gold Banksian, Mr. Falconer.

The turf of the gardens was in the finest possible state, and every thing showed the good effects of the late showers. The very beautiful flower, the Wistariæ Sinensis, which extends over a great portion of the wall on the north side of the grounds, was in full blossom, and gained universal admiration.

ADVANTAGES OF FLOWER SHOWS.

THE Society's fêtes and exhibitions, for the promotion of the horticultural arts generally, have, no doubt, been of great use in every department, and not less in that of flowers than in any of the others; for it has been much owing to them, not only by means of those collectors whom they have sent, directly of themselves and at their own cost, into almost every region of the world, but also of others whom they have inspired with the same desire of examining the vegetation of all climates, and selecting its beauties, that more new flowers have been introduced in some single years, since they were in activity, than were formerly introduced in a century.

But the establishment of such societies, so that they shall be properly effective, requires the cooperation of many influential men, and the constant expenditure of a good deal of capital. Therefore their labours are necessarily confined to particular localities, so that they can directly influence only a limited portion of the population; and even though these could be made more general than appears to be possible, their exertions would still be imperfect, because their grand object is to procure novelties; and, after this, there still remains the equally important labour of ascertaining the improvements of which these novelties are susceptible.

This, to be rightly done, requires the study of many heads, and the labour of many hands; and as it is one of the most healthy, most innocent, and most instructive methods of occupying those leisure hours which the very constitution of our nature renders it necessary that even the humblest class of labourers should enjoy, some means are required which shall give a local impulse to the delightful occupation of tending and improving flowers, and this with due emulation, and at the smallest expense possible. This is now very generally and successfully, and, we may add, delightfully done, by means of floricultural associations upon a minor scale, which are ramified through every county in the kingdom, and are met with in the villages, as well as in the towns. In promoting anything which is good, there is not a more successful method than for each man to strive with another, who shall do it best. This holds true in every art and every pursuit in which human beings can be engaged; and as there is no occupation more perfectly free from animosity and selfishness than floriculture, the emulation of man with man in this art gives a higher and more kindly tone to the minds of all, at the same time that it tends greatly and effectually to the improvement of the art itself.

The reason of this is very apparent. There is no object in the cultivation of a flower beyond the fact of its being admired, and the pleasure resulting

from this admiration; and if the beauties which a man in common life succeeds in obtaining, are confined to the admiration of himself and his family, and to such friends as may occasionally see them, there is not sufficient stimulus to make him exert himself with the requisite degree of vigour. So situated, he not only wants the accommodations of those who grow flowers in the way of business, but he also wants a definite object. They have the hope of gain, blended with the hope of glory, to spur them on, and make them exert themselves to the very utmost; but the individual florist, who cultivates with no view to pecuniary reward, and has no hope of praise for his labour beyond his own satisfaction, and the commendations of his private friends, is without either branch of that stimulus which acts constantly with the professional florist; and consequently, with equal time devoted to the art, the results are necessarily inferior to what they would be had he more definite objects to excite him.

The local society of the district or the village, as it may be, goes a considerable way towards supplying those necessary stimuli. The desire of surpassing his neighbours in producing something excellent—the best and most wholesome desire, by the way, that any human being can possess—makes every one exert himself to the very utmost, in order that he may have a fair chance of standing foremost at the show; and as the prizes contended for at those shows are of an honorary nature, rather than a mercenary one, they tend to liberality, and not to selfishness, at least in any of the objectionable senses of the term. The truth of this is apparent in the very principle; but were proof necessary, it would easily be found in the fact, that the meetings of cultivators of flowers, even when they meet to strive, as it were, who has been most successful, are remarkable for the perfect harmony with which they are conducted, and the readiness of all to acquiesce in the justice with which the prizes have been awarded, and admire that superiority by which they have been won.

It requires no argument to prove that, if this is established in any one occupation of men, it will find its way to every other occupation of the same men; and the man who strives to excel others at the show of flowers, will also endeavour to excel others in the ordinary pursuits and urbanities of life. Convinced of the truth of this, and of the beneficial effects of those exhibitions, it is our intention, at the end of moderate periods of time, to give lists of them, with as full particulars as our limits will admit; and for this reason we shall be most happy to receive information from all parts of the country, as ample and as accurate as possible.

LITERARY NOTICE.

One of the most important Works to the Horticulturist and Vegetable Physiologist, which has, perhaps, ever appeared, is now in preparation. It will comprise the Papers and Correspondence of the late President of the Horticultural Society, Thomas Andrew Knight, Esq., and also letters of some of the first Botanists and Naturalists in Europe. We understand the materials are in the hands of George Bentham, Esq., Secretary to the Horticultural Society, and Dr. Lindley.

THE

FLORIST'S JOURNAL.

JULY 1, 1840.

CONTRASTS OF COLOUR IN FLOWERS.

IN our Second Number we endeavoured to point out the advantages of so arranging flowers as that, by the contrasts of their colours, they shall mutually heighten the beauty of each other, and thus render the whole collection more attractive to common observers and to purchasers. We shall now endeavour briefly to explain the principles upon which this arrangement is founded; remarking, by the way, that the utmost skill of the florist in obtaining finely coloured flowers loses much of its effect if due attention is not paid to the arrangement of the collection.

In explaining the principle, there are two subjects to be considered,—the colour which is perceived, and the eye which perceives it; and it is just as necessary that the eye should be in the best condition for feeling the beauty of the colour, as that the colour should have beauty to be felt.

Colour, it must be borne in mind, is nothing but light, modified by some property of the surface of a substance, of the nature of which property we know very little; for, considered merely as substances, there is no substantive red in a red rose any more than there is in a white one. When light comes to the eye complete and pure, it is white, and far more intensely white than the reflected light which comes from a white substance. In nature we never see the full intensity of this light, as it is always weakened, and blended with various other tints. Perhaps this is well for us; for, were the sunbeams to reach our eyes perfectly pure, they

would in all probability strike us blind in an instant. Those atmospheric reflections and refractions which veil the stars when the sun is above the horizon, also soften the light of the sun, so that we can take a glance, though but a momentary glance, at its disc, even in the most transparent state of the atmosphere. Were it not for this, it is probable that the intensity of the direct light of the sun would take off the beauty of all reflected lights, and the gay colours of our flowers would be blended in a single indefinite and dingy tint; but, in accordance with the beautiful law of adaptation which can be traced through the whole of nature, light and the eye are so suited to each other as to give us the enjoyment of every visual beauty. We may remark, that perhaps the nearest approximation which we have to pure and entire light is that which is produced by the combustion of oxygen and hydrogen gases in the proportion in which they form water; and when this is concentrated by a powerful lens, no eye can, even for an instant, bear the intense brilliancy of the focus. So much for entire light, which is a compound of all imaginable colours blended together, just as perfect black is the absence of every colour.

As long as light proceeds in its natural course of straight lines, whether directly from a luminous body, or by reflection from a surface having no tendency to decompose it, it retains its whiteness, or rather transparency, with more or less intenseness, according to circumstances; and in this way a mixture of all possible shades of colour, intimately blended, is the medium by which we are enabled to see, and distinguish, and appreciate all the individual colours. This is a singular property of light, and as beautiful as it is singular; and it is perhaps the only instance which we have in nature of a whole being the means of self-analyzation, and making known to us all the parts that can possibly enter into its composition. It is of entire light only that this can be said, for when we look at objects in a partial or coloured light, they are all tinged with that colour; as, for instance, when we look through a piece of red glass, both earth and sky have a reddish tinge.

When light passes out of one transparent medium into another of different density, it is refracted, or bent out of its natural direction; and if it again pass into the first medium by a surface forming an angle with that at which it entered the refracting substance, it will be decomposed. The instrument commonly used for this

purpose is a triangular prism of pure, transparent glass; but it is effected by many natural substances, as, for example, by the rain-drops, which decompose the light, and thus paint the rainbow in the heavens; or the early dew-drops upon the grass, which prank the lawn with every tint and every radiance which fancy can picture to itself. Different transparent substances decompose light in different degrees of perfection; the colours arising from decomposition by glass being more distinct than those from the same process by water, and diamond giving a still more perfect decomposition. If the light decomposed is a cylindrical beam, admitted into a darkened apartment through a circular hole in the window-shutter, and the *spectrum*, as the decomposed light is called, is received upon a wall, or screen, at right angles to its centre, and parallel to the axis of the decomposing prism, the spectrum is extended in the cross direction about five times as much as its breadth in the direction of the axis; and it consists of seven distinct colours,—each most intense in the middle, but which so melt into each other on their confines, that the entire spectrum contains almost every imaginable tint of colour, though seven only are distinctly apparent.

These are obviously produced by the different refrangibilities of different parts of the beam, the least refrangible lying nearest to what would have been the direction had the beam not been refracted, and the most refrangible at the opposite extremity of the spectrum. Red is the least refrangible, and violet the most so; and from red to violet there are orange, yellow, green, blue, and indigo, which, with the red at the commencement and the violet at the close, make up the seven. If we suppose the entire length of the spectrum to be divided into 360 equal parts, the colours occupy the following portions:—red, 45 parts; orange, 27; yellow, 48; green, 60; blue, 60; indigo, 40; and violet, 80. On comparing the portions occupied by these colours, it will be perceived that the blue edge of the green is exactly in the middle of the length; but as the colours at the violet end are less intense than those at the red end, the medium colour is within the space occupied by the green, though a little nearer to the blue than to the yellow. This medium colour is the one which is best adapted to all states of the eye; and it is worthy of remark that this is the general colour of vegetable nature, and the one which sets off all the others, and refreshes the eye when it is fatigued

by any of them. The effect of this may be seen by a very simple experiment:—let there be two red roses upon the same thickly-leaved and healthy tree, both equally expanded and equally beautiful. Pull one without leaves, lay it on the gravel walk, stand equally distant from the two, and half the beauty of that on the walk will be gone. Remove it to the grass-plat, and its beauty will return, though not to the same extent as it had when on the tree, clearly showing that the beauty of a rose is best set off by its own leaves; and the same holds true in the case of every other flower. This gives us a useful hint for our arrangement;—we must study not merely the contrasts of flowers, but the contrasts of entire plants, both flower and leaf, in order that the resulting beauty may be the greatest possible.

Such are the colours into which light is resolved by one simple decomposition, and such the extents which they severally occupy in the spectrum; but before we can fully understand the principle of their most advantageous contrasts, we have two considerations to take into account,—the absolute or mathematical contrast of the colours, and the sensal contrast as they affect the eye. The first of these is a matter of experiment; and the second is a matter of observation,—and though the same in kind in all human eyes, it is probably not the same in degree in any two persons.

With regard to the composition, it will be seen that the sum of the above numerical portions of the spectrum occupied by the seven colours, answers exactly to the 360 degrees into which mathematicians divide the circumference of a circle. Therefore, if a circular board, fixed to an axis, is taken, and painted, or covered with paper, in the order, proportion, and tint, of the seven colours, each colour occupying a sector, extending from the centre, and extending as many degrees on the circumference as its number of parts in a spectrum, this circular board, upon being turned rapidly round, will appear altogether of a pure white colour; proving that it contains the coloured elements of white light in their due proportions. If one colour is omitted, and pure black substituted in its place, the colour of the revolving board will not be white, but the complement of the colour which is omitted. As, for instance, if the red is omitted, the colour of the revolving board will be green; if the yellow, it will be blue; if the green, it will be purple; and if the blue, it will be red. There is another and an easier method of finding out the complemental

colour which results from the omission of any one or more of the seven :—Let them be arranged as before, or let sectors answering to the breadths be marked off upon the circular disc of paper. Then, let any one be omitted; and a diameter, drawn through the middle of its sector on the circumference and the centre of the circle, will cut the opposite circumference in the *locus* of the complemental colour, which may be either in the intensity of a single colour, or on the confines where one blends with the another. If two colours which lie next to each other are omitted, a diameter through the middle of their two arcs and the centre will cut the opposite circumference in the colour which is complemental to the two; and if the two are not proximate to each other, the complemental colour will still be found by drawing a diameter intermediate between the middles of their sectors. Upon this principle, if the blue is omitted, the diameter bisecting its sector will meet the opposite circumference in the orange part of the red; and so of the other colours, the complements of which may be found either by a diagram or by simple calculation. Thus, if we omit the yellow, the half of which is 24, we have the opposite extremity of the diameter upon the indigo, within 4 degrees of the violet; if we omit the orange, we have the complemental colour upon the green, near the verge of the blue; if we omit the violet, we have the complemental colour upon the green, two-thirds from the yellow; and so of all the other colours.

If the colours had been an even number, each occupying an equal extent of the spectrum, there would have been but one set of contrasts, and each pair of colours would have been reciprocally the complements of each other; but the odd number and unequal extent of the colours give rise to a very great variety: and by this means we are not tied down to one single colour, as the means of relieving the eye from the fatigue of another, or rendering it keenly susceptible to its beauty, but can range through all colours, and find relief and beauty at every change.

The accidental colour, as most agreeable to the eye, does not in all cases correspond with the mathematical complement. White and black, being the contrast of every colour with no colour at all, are constant, and have no accidentals but each other; but none of the others reciprocate in pairs. Thus, green is the accidental colour of red; but red is the accidental colour of blue; while green is the accidental colour of purple. So also, blue, of which

red is the accidental colour, is the accidental colour of yellow; and so on of the others. Hence it appears that the remainder, or complement of the solar beam, always forms the accidental, or relieving and heightening colour to any single tint; and if we follow this order in our arrangements, we can produce a harmony of all the compounds, though white and black do not come into the circuit.

In this, however, as in all other cases, actual observation does not quite agree with theory; and the chief reason of this is, the variety of light tints of colour which are continually sporting in the atmosphere, and varying the tones of every landscape, and the tints of every flower, almost every moment. But this, instead of being any disadvantage to us, is quite the contrary; because it multiplies all the beauties of nature to a very great extent.

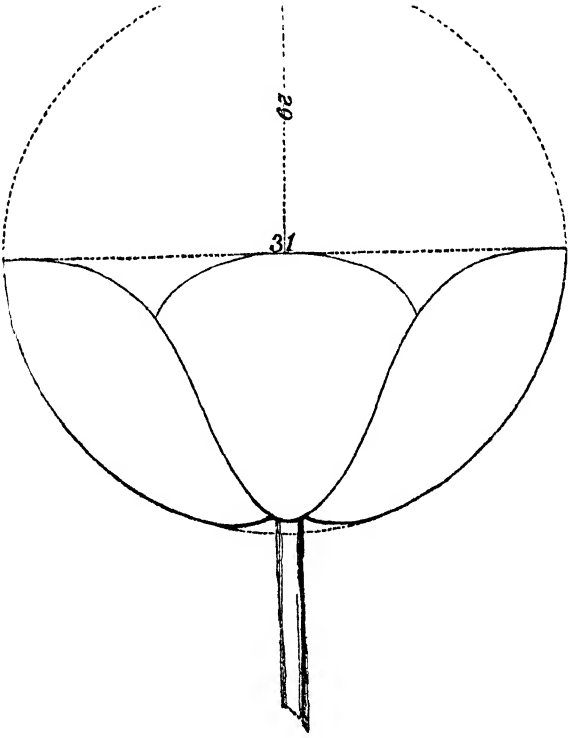
We can have a simple illustration of this by looking at the disc of the sun, especially when near the horizon, until the eyes are dazzled; and then, by turning aside a little, we see numerous discs, of a purplish green colour; and if we manage the eyelids judiciously, we can turn those visual spectra of the solar disc to almost any colour we please. The subject of compound or resulting colours, though an important one to the florist, is, however, one of which we must defer the consideration to a future paper.

ON TULIPS.

BY MR. GROOM, WALWORTH.

In giving a description of the properties and the mode of cultivation of a flower like the tulip, which has received so much attention for so long a period, I fear I shall be charged with repeating what has already been stated by others; but, as all your readers may not be aware of these properties, or of the facility with which a bed of tulips can be managed, I shall venture to give a short description. If we commence with *Tulipa Gesneriana*, from which all our fine varieties are said to have been obtained, we cannot but admire the perseverance of the first cultivators of this flower, the Dutch, as the time and labour necessary to obtain the varieties which we have received from them must have been enormous,—when we consider that the *Tulipa Gesneriana*, as we

now see it, does not possess one of the properties which are viewed as requisite to constitute a fine flower, and which are possessed to a considerable degree by some of the Dutch flowers. It must also be borne in mind that, in raising tulips from seed, (the only way to obtain new varieties,) it requires six years' cultivation of the young bulbs before you can expect to see them flower, as it is rarely before the seventh year that their blooms are produced; and after the bulbs have flowered, it not unfrequently requires several more years of cultivation to obtain a separation of the colours. Under these circumstances, although we can now, in England, boast of having completely surpassed the Dutch florists in this flower, we are still much indebted to them for having produced those fine kinds on which we have improved, and from which we started, instead of having to commence, as they did, with *Gesneriana*.



In mentioning the properties most desired in the Tulip, I consider the shape of the cup of the greatest importance. It should consist of six petals, three outer and three inner, which should be placed alternately, and close to each other; they should be broad and round on the top, and smooth on the edge, and sufficiently wide to allow of the edges lying on each other when fully expanded, by which all quartering or opening between the petals will be avoided, that being a great objection; they should also possess considerable firmness, with a little swell outwards towards the lower part of the petal, which will give the flower a good shoulder, as it is termed, and prevent its losing its form. The shape of the cup, when fully expanded, should be a semi-oblate spheroid, the stalk being inserted in the pole, which pole should be a little depressed; this I consider the best form to retain the beauty of the flower during all its stages. The petals should be all level on the top, and not the three outer ones turning back from the others, nor the inner higher than the outer, which is not uncommonly the case, particularly when the flower is a little past its prime. The ground, by which we mean the white or yellow on which the other colours are marked, should be pure and rich, without spots or stains; and it is of the greatest importance to have it quite clear of any colour or marks at the base of the petals around the staminæ, for a stain there is a permanent defect which no cultivation can remedy: it is also desirable in the yellow grounds that the colour outside of the petals should be of the same intensity as inside, as there are many flowers possessing good qualities that are rendered defective by having a very pale yellow or nearly white outside. There is a class of flowers called tricolors, having neither white nor yellow grounds, which are much esteemed by some amateurs; but I confess I do not admire them: I prefer the pure white or clear yellow ground.

The stem should be elastic, and strong enough to keep the flower erect; and it is essential, to produce a good effect in the bed, that it should be sufficiently tall for the size of the cup, as a large flower on a short stem looks very awkward: it is equally objectionable to have a small flower on a tall stem.

The three principal classes into which the Tulip is at present arranged are,—the Rose, having a rose or cherry colour on a white ground; the Byblœmen, containing all the shades of purple and brown, also on a white ground; and the Bizard, having various

colours on a yellow ground. I would here mention that neither colour is considered superior to the others; at the same time, there is no doubt the rose on white is most pleasing to the eye, but we must not allow ourselves to be carried away by the first glance, but rather judge by the real merit of the flower.

In the distribution of the colour, I consider a fine rich sharp feather, as it is termed, (which is so named from the resemblance it has to the feather part of the quill, but by the French florists called the moustache,) commencing on the edge of the lower part of the petals, a short distance from the staminæ,—and continuing completely round the top, where it should be deepest, to the other side, with each petal alike,—and leaving the remainder of the flower of the clear ground colour, without any spots or specks, as the most perfect and beautiful character. Next to this comes the flamed flower, which should have, besides the feather, a rich beam up the rib of each of the petals, branching off on either side, and the points meeting the feather; at the same time preserving a sufficiency of the ground colour between the flaming to display it to the greatest advantage. There is also another kind of flame, much admired about London, and some parts of the country, which is a flame beginning at the lower part of the petals, and branching upwards without any feather; this gives a beautiful star-like appearance when the flower is expanded. There are other distributions of colour, such as a single stripe up the rib of the petal, &c.; but wherever the colour is placed, all the petals should be alike, or as nearly so as possible, and in all cases there should be a circle of the ground colour round the staminæ.

All the various distributions of colour add much to the effect of a bed, but some of them are not such flowers as can be shown for prizes, particularly in some parts of the country, where the only characters admissible are the feathered and the flamed. The brilliancy and intensity of the colour are of considerable importance; at the same time there are some light coloured flowers very beautiful. Whatever the shade of colour may be, it should be well defined and clear, and the flower free from the breeder, or original colour; and if there is a second shade, which is sometimes the case in the flamed variety, it should be bordered with the darker colour; which prevents its flushing or running. The flushing or smearing of the colour is at all times most objectionable, but

particularly so if it is a character of the kind of tulip. I have often had flushed or partly run flowers admired by persons not acquainted with the properties of the Tulip; but there can be no doubt which is the most beautiful,—the feathered flower having the appearance of a fine engraving, each stroke of which is sharp and brilliant, and the whole producing an elegant effect; whereas the other is like a drawing upon which water has been spilt, and blended all the colours together. Having extended the present remarks on the properties of the Tulip beyond what I expected, I will defer any account of the cultivation until another period, as I fear I already have occupied too much of your work.

I am, sir, your obedient servant,

H. GROOM.

Walworth, June 15, 1840.

PRINCE ALBERT, our illustration for this month, is a fine deep feathered bizard, with a peculiar pale, but clear straw ground, and expetal form; raised from seed by Mr. H. Groom, of Walworth; which broke for the first time last year, and blooms the present season in his extensive bed, retaining the same beautiful feathering with which it came on its breaking. It has the double advantage of being suited to the country as well as the London taste, feathering so correctly as to please the most fastidious. It was named by Mr. Groom in compliment to his Royal Highness.

COMPARISON OF THE SELANTHI WITH OTHER PLANTS.

BY THE EDITOR.

THOUGH the grand division of the vegetable kingdom to which this name has been given are certainly not "Florists' Flowers," nor have they been cultivated by man, yet they are, perhaps, more exclusively flowers than any plants whatever, excepting, perhaps, some of the fungi, which are usually considered as having no flowers at all. Besides this, one of the greatest advantages of floriculture is the tendency which it has to produce a desire for knowledge in every department of the vegetable kingdom; and when once this desire is properly excited, it will feel its way to the knowledge of all nature, and of all subjects whatsoever;

and make the flower-grower a man of very general intelligence, without any labour on his part, and even without being aware of how he came by much of what he knows; for it is the grand characteristic of the voluntary march of knowledge, that the distance is won without feeling any fatigue in the steps.

Now, no plants can be better adapted for exciting and strengthening this desire than the Selanthi. Of all vegetables they are the most singular in their appearance and habits; and even the most zealous and profound botanists are yet in comparative ignorance of their economy and uses in nature. Externally, they appear all flower, or all formed for the production of a flower; and they are always without leaves; and some of the most splendid of them have little or no development of root or stem. They grow, generally speaking, upon the roots of other plants,—often those of the ivy-tribe; but though many of them adhere to the roots, or lower parts of plants, and some germinate under the epidermes, we cannot say that they are absolutely parasites, drawing their nourishment from these. Parasitism among plants is altogether an obscure subject, and one upon which the conclusions at which we arrive by common observation are very liable to error. The fungi, for instance, stand accused of consuming the substance, even the living substance, of those plants on which they appear. But this is only asserted, not demonstrated; and the analogies are against its truth. From analogy, we are led to conclude that no one plant subsists, or can subsist, upon the living or undecayed substance of another. Sawdust cannot be used as the entire soil of every plant; neither is recent sawdust of the smallest value as a manure. Before the substance of one plant can conduce to the nourishment of another, there must be a decomposition different from simple mechanical division, however minute; for the dust into which rotten wood can be crumbled is of no more value as a manure than the sawdust of sound timber. Animals digest before they assimilate; and, in so far as has been discovered, as plants have no digestive organs, the natural decomposition of substances appears to answer a similar purpose in them to that which digestion answers in animals. So obscure is the subject, that though the favourite soil of many plants is known, we cannot name the specific food of any one individual. Probably it is gaseous in them all; and water or air, according to the habit, is the vehicle in which it is administered.

That the fungi live—though not exclusively, or indeed at all in some of their species—upon the decomposition of vegetable matter, is proved by the latitudes in which they are most abundant, and the times of the year at which they make their appearance in the full development of the part of fructification. The mushroom, or, as we may without much impropriety term it, "the flower,"—though it is a flower of peculiar character, without obvious distinction of what fertilizes, and what is fertilized, and thus totally different from all the common flowers to which we are accustomed to restrict the name,—is an instance.

In the tropical regions, where there is no seasonal fall and decomposition of the leaf, the fungi are so few as scarcely to form a characteristic part of the vegetation; but as the latitude increases, and the seasons become more strongly marked, the fungi are found in greater number; and the numbers, both of species and of individuals, go on increasing with the latitude, until the extreme limit is arrived at, and vegetation falls off in all its tribes, except the lichens, which are little subject to annual decomposition, and therefore afford no food for the fungi. Thus, these plants, in their more characteristic species, do not follow either the direct or the inverse ratio of vegetable action; but within the limit already mentioned, they increase with the shortness of the summer, and the greatness of the autumnal change. Circumstances favourable to their growth may develop them at any season of the year, but their proper season is the autumn, or that period when the decomposition of vegetable matter begins. Even then, however, they do not assail those plants, or parts of plants, which are still in vigorous health; for when fungi come upon meadows, or lawns, or other grassy surfaces, they do not in the least consume or injure the green part of the grass, but rather refresh its greenness, and quicken its growth, by "working up," if the term may be allowed, the dead matter which is decomposing among the roots, and which, but for the labour of the fungi, would act as a poison to the living plants, and parts of plants. The benefit which the fungi confer in this way is very clearly seen in those "fairy rings," or increasing circles of fungi, with which many of the downs and dry commons are marked. One year's labour of these fungi performs the work of many years; and the new crop always vegetates without the line of the old one, while the grass upon that line is exceedingly vigorous, after the fungi have

disappeared; although, while they are in growth, the strong action parches the ground, and makes the common herbage disappear. Humidity is essential to their vigorous action; and after a rainy night, numbers of them may be found in the morning, where not one was visible on the preceding day. This shows that a solution in water of vegetable matter, while in a state of decomposition, is essential to the vigorous action of the fungi; and this is confirmed by the fact, that, in places and years of showery autumns, they are far more abundant than when the autumn is dry.

Drought is the autumn and the winter of vegetation in tropical climates, and in all climates approaching to a tropical character; and, therefore, such climates are by no means adapted to the natural habits of the fungi. The Selanthi come, in part at least, to perform in tropical latitudes the office which is performed by the fungi in latitudes of more polar character; and though we know but little of their physiology, analogy leads us to conclude that they receive the products of decomposed vegetable matter through the medium of air, rather than that of water. Thus we may, without impropriety, style them a sort of air fungi; and as their mode of action is different from that of the fungi properly so called, so also is their organization. The genuine water-plants, or those that grow wholly in the water, or are only partially exposed to the free atmosphere on the ebbing of the tide, have no flowers in the common meaning of the term; and the fungi, at least in what are considered the essential parts of a flower, agree with them in this respect. The Selanthi also agree with the fungi in some parts of their structure, and in several of their properties; but, in others, they agree with flowering-plants. We need hardly mention, that the grand division, as regards their texture, of plants, is into those which are cellular, or wholly made up of membrane, forming a tissue of cells of some form or other; and vascular, or those which have their cellular tissue more or less interspersed with tubular vessels. The first of these divisions consists of plants which, though they have organs of fructification, have no flowers, according to the common definition; and though they perfect spores, or germs, often in numbers almost incredible, those germs have in no case the same organic structure as the true seeds of plants with ordinary flowers. The vascular plants, again, all have flowers; in which the fertilizing and fertilizable

parts can be distinguished, either by the naked eye, or by the microscope; and the germs of them are, in all cases, true seeds, how much soever they may differ in appearance, or in the form and arrangement of their parts.

This, by the way, is a matter well worthy of the attention of the florist, especially of him who seeks to obtain new and improved varieties by hybridization,—that is, by applying the fertilizing part of one variety to the fertilizable part of another. Every flowering-plant which has been broken into varieties, either by difference of climate or situation, or any other means, known or unknown to us, admits of trial, at least, in the way of hybridizing. But the cellular plants, having no distinction of parts in the flower, cannot be treated in this way; and the most experienced gardener cannot, with all his art, obtain a single hybrid variety of Mushroom, of Fern, or of any other flowerless plant. This points out a limit to the process; and shows that, for whatever object it may be undertaken, it belongs wholly to the province of the florist.

There is one natural circumstance connected with this impossibility of hybridizing the flowerless plants, which is worthy of attention, as showing how beautifully all the parts of nature are designed and executed, and how superlatively divine is the wisdom which pervades the whole system. The greater number of the flowerless plants, especially the fungi and the allied families, are perfectly nomadic while they remain in the state of germs, or sporæ. They are here, there, and every where, not only within the regions where they vegetate, but all round the globe; and very many of them are so exceedingly minute, that they ascend in the air like vapour, and ride buoyant on the wings of the lightest zephyr that can blow; not only this, for they exist in the substance of rocks, of plants, and of animals, even in situations where no human scrutiny can discern a pore. In consequence of this, if they were capable of hybridization, they would become blended with each other, until the distinctions were lost; and, as every distinct plant has a distinct office to perform, this blending would produce confusion in the system, the final effects of which no one could anticipate. But the very law of their nature restrains them, and the principle of self-preservation is as obvious in the system of nature, as in the individuals which make up that system.

The Selanthi, so far as has been discovered, are much more limited, both in their numbers and their localities, than the fungi; and they do not require the same erratic power, or the same provision against confusion. Hence they are flowering-plants, with the organization apparent, though still different from that of the flowering-plants, properly so called. In their texture they do contain vessels; but these vessels are fewer in proportion to the cellular matter, than in the ordinary flowering-plants; and therefore we may, without impropriety, describe them as cellular plants, with more or less of the vascular plant combined.

In some, the tubular vessels are scarcely discernible; and in all they are few, and chiefly confined to the lower part of the stem, or the scales which envelope the flower-bud; and where those vessels appear, it is by no means certain that they are in any way connected with the nourishment, or other vital functions of the plant; for like the flower of the mushroom, these plants appear to absorb their nourishment by the floral portion itself, in whatever form it may be developed. The parts of fructification are usually distinct; but in those which bear compound flowers, the one part is often abortive in one portion of them, and the other part in another portion. The seeds, too, are not in any one of the species perfect seeds, but something intermediate between seeds and spores. There is a distinction of embryo and albumen in them, though in some it is not easily made out; and while some seem furnished with two cotyledons, others appear to have only one. Thus they cannot easily be brought into the arrangement of the flowering-plants, according to any of the received systems; and yet the perfection of their flowers, and the structure of their seeds, forbid their being classed among the flowerless ones. They appear to hold in the vegetable kingdom a place analogous to that of the marsupial animals among mammalia; that is, they agree with one or other of the regular families in some respects, but differ from them in others.

One of the most magnificent and peculiar of the whole tribe is the *Rafflesiæ*, which is found in the woods of the Oriental Archipelago. *R. Arnoldi*, the most magnificent hitherto discovered, is almost entirely flower. The natives call it *Krúbût*, "Great Flower;" or *Ambun Ambun*, "Wonder, wonder!" and it is not unworthy either appellation. Specimens have been seen, in which each petal was a foot long, and the nectary the same in

diameter, and so deep as to contain three gallons. The petals are also very thick; and the weight of this particular specimen was computed to be fifteen pounds, which is probably the heaviest flower on record. The colour is a lurid red, and the petals and margin of the nectary are beset with warty excrescences. They are five in number, and recurve backward at their extremities, which are oval. The odour of the flower is peculiarly offensive, resembling that of flesh in a putrid state; and like the *Phalli*, and other offensively scented fungi, it appears to attract vast numbers of flies.

The others vary considerably from this one: some having pretty long stems, and others, Rhizoma, creeping under ground; but all of these have fibres, by which they attach themselves to other plants. It is not known whether, like the fungi, any of them are poisonous, but they are all astringent, and some of them styptic: and the Maltese one is still used in continental medicine, though not now, as it once was, sent as a precious gift to kings.

IMPROVEMENT OF WILD FLOWERING PLANTS.

BY JAMES MAIN, F.L.S.

Among the many feats of floriculture, that of domesticating and improving the wild gems of the brake and uncultivated common, is one of the most satisfactory. In their native bed they are diminutive, inconspicuous, and neglected, because they are accompanied by thorns, thistles, and other repulsive denizens of the barren waste; but when introduced into the garden, they soon become amplified in all their parts, and striking objects of our regard.

The very remarkable changes which wild plants undergo when transferred to the ranks of civilized vegetation show how very versatile they are. The general form is altered; the flowers become enlarged, doubled, and proliferous; the colours become more intense, or entirely changed, within certain limits;—lively yellow is the least variable; dull yellow, in general, becomes white, or red, or dark brown, but never blue. These changes are, for the most part, accidental; but there are many cases in which the tints of the blossoms may be changed by art. Invested with this power, the florist may originate many new beauties; his and his

brethren's aim, at present, should be to procure, if possible, blue Dahlias, Tree Pœonias, and Calceolarias. The means to be employed to accomplish, or at least attempt to obtain such results, will often be adverted to in the course of our journal.

But to return to the improvement of wild plants, we may first notice one of the most common and most humble. The Daisy (*Bellis perennis*) is chiefly a spring flower, though it may be seen, more or less plentiful, in all months of the year; embroidering every footpath and every piece of old pasture. This little "crimson-tipped flower" is, in its wild state, very uniform in size and colour; and, as it is very prolific in seed, it soon becomes a formidable usurper on turf laid down for the sustenance of sheep and other cattle. Whether some wild individual accidentally showed signs of variation, and so attracted the notice of some lover of flowers who might probably introduce it into his garden; or whether some florist, aware of the practicability of improving such wild flowers by art, tried his skill on this plant; is now unknown: but the present appearance of our cultivated Daisies shows decidedly that some pains have been taken with them.

The richer or more suitable compost of the garden has a direct influence on the vital energy of the Daisy; it not only becomes more luxuriant in its foliage and stature, but the normal character of the flowers themselves is changed; for they are composite, (that is, a crowd of florets are seated together on a common receptacle,) those forming the yellow disk, being all bisexual, have no protruding corollas, and the florets of the ray or margin, being all unisexual and female, have each strap-shaped diverging corollas. Now these female marginal florets being fecundified by the stamens of the disk, were considered by Linnæus to be superfluous, and hence the title of the order (*Superflua*) in which the Daisy is placed. But culture produces other remarkable changes; the numerous florets of the disk are almost all changed into females, each having a corolla and crowded together from the centre outwards, forming the double Daisy, of which there are two curious sorts; namely, the piped, or double quilled, and the proliferous, or hen-and-chicken variety. The latter is a remarkable departure from the natural structure. In the wild habit, each flower has its own peduncle, but in this cultivated sort the peduncle becomes branched into pedicils; each of which bearing a perfect and very diminutive flower at the point, arranged round

the principal in a very interesting manner, fully justifies its provincial name.

To preserve these aberrations from the normal habit, and to continue them pure, the plants must be frequently transplanted into fresher and richer soil, for if this is neglected, they quickly return to their wild state.

One other instance of the effects of cultivation may be noticed on the present occasion, and that is the wonderful improvement which has of late years been accomplished by the superior treatment bestowed upon the wild Scotch Rose. This rude, despised plant is found plentifully on the most rugged "banks and braes" of the northern parts of England and in Scotland. In those places it is a diminutive unattractive shrub, with small, single, almost scentless flowers; and exceeding repulsive from its hostile appearance, being profusely bristled with thorns. Wherever it is seen, it indicates sterility and neglect; and while its congener is called the dog-rose (*Rosa canina*), this, among country people, is called the cat-rose (*Rosa spinosissima*). It is within our recollection that no variety of the Scotch Rose was to be met with in gardens; but it having been observed that some of the wild ones had a tendency to vary from their natural habit by occasionally producing marbled flowers, and that some individuals were more double than the majority, these were thought worthy of culture, and accordingly were transferred to the rosarium. Here they were soon found susceptible of improvement, and being treated with richer soil, placed in better society, made to feel the control of the pruning-knife, and all the other manipulations of the florist's art, they became one of the most valued sections of the genus to which they belong. We have already above thirty varieties of this wild rose obtained from seeds impregnated by the pollen from other species of the family; and indeed there seems to be no end to the new varieties which may be originated by similar means.

Rosariums are a fashionable feature in flower gardens. Pruning closely, and keeping the branches near the surface, and layering the longest shoots, are the usual means. But as it is our intention to give a detailed practical account of the culture of the rose family in an early number, we forbear anticipating the subject by any further observations at present.

The examples we have given above of the practicability of

improving by domestication the wild plants of our uncultivated tracts of country, are only intended to call the attention of our readers to the subject; the practice of it with other wild plants, which we need not now mention, is a pleasing and rational amusement, and which every one having a bit of ground may pursue.

FORMATION OF A FLOWER-GARDEN,

BY. R. PLANT.

In our last number, we mentioned the necessity of a judicious arrangement of the plants intended to embellish the borders of a flower-garden; and as much remains to be done in it this month, we again refer to the subject, considering it most essential to the production of those agreeable feelings of delight which the parterre is intended to impart.

This leads us to the consideration of what a flower-garden should be in point of form and size; yet, from the great extent of information already given on this subject, we feel fearful of being taxed with plagiarism. Endeavouring, however, to avoid this, we shall merely observe, that a plot of ground solely devoted to the growth of flowers should be of such a size that it can be easily managed, so that each individual plant in it may have its proper modicum of attention and care; it being an acknowledged fact, that there is more pleasure in the possession of a few well-grown plants, than can be derived from a large, yet badly grown collection.

It matters little what the shape of it is—a square or circular form is, perhaps, the best; but if the situation can be chosen, the southern side of a hill is best adapted to the growth of such plants as are usually found in flower-gardens. The laying out depends entirely on the taste of the person engaged in it; and nothing can be found in which good taste and sound judgment may be displayed to more advantage.

It should be so arranged that every part may harmonize with the whole. It is a question often argued, whether a flower-garden should be in unison with the surrounding scenery, or not. We are in favour of the contrast; for what can be more pleasing than, amid a rugged landscape, to observe a small spot verdant and level, where nature seems to have collected her choicest

gems; and, on the contrary, when surrounded by an open flat country, a diversified surface, scattered over with innumerable beauties, will arrest the attention of the most indifferent.

If grass or water can be introduced with proper effect, they are great ornaments; yet nothing can be worse than the appearance of little narrow edgings of grass, continually out of order, looking like a tuft here and there the gardener had neglected to remove. In such cases, an edging of box is by far the neatest; and though more expensive at first, it is more durable. The principal walks should be at least three feet in width, with a good substratum of stones or brick rubbish, and a gentle rise towards the centre of the surface, which will keep them dry, and prevent moss from growing on them.

We now come to the arrangement of the plants. Where sufficient space may be commanded, small beds, filled entirely with one kind of plant, form an excellent method, inasmuch as the plants have usually more room, and are, consequently, better grown; having, for instance, a bed of Dahlias at the back, one of Roses before them, and in front, a bed of some pretty and free-flowering annual. Or they may be composed of two or more distinct varieties, or even genera, observing to choose such plants as require the same soil and treatment, and are of similar habits, yet of contrary colours. This, though more difficult, is perhaps the best, as it brings the different colours in closer contact, and affords a richer contrast. We subjoin a list of a few of the most appropriate plants for mixing, intending them merely as an illustration of what we have said, there being many others equally suitable for the purpose.

Where there is not room for so many beds as would be required to contain a sufficient number of plants to obtain the desired effect, they may be planted together; taking care to keep the tallest at the back, or centre, as the case may require; bringing them down by a gentle gradation, till you have the humble Mignonette, the pretty Nemophilla, or sparkling Ice-plant, at your feet.

				Ft.	In.
Anagallis Phillipsii	(blue)	with	A. grandiflora superba. (red)	1	0
Campanula Lorei	(white)	—	Blue var.	1	0
——— Garganica . . .	(white)	—	Blue var	1	6
Escholtzia crocea	(yellow)	—	Nemophilla atomaria . (blue)	1	0
Clintonia pulchella	(blue)	—	Schyzopetalon Walkerii(white)	2	0

				Ft.	In.
Heliotropium corymbosum (lilac)	with	Emmeris linearis . .	(scar.)	2	0
Lobelia propinquens . . .	(scar.)	— L. azurea	(blue)	3	0
——— cardinalis	(red)	— Commelina cœlestis .	(blue)	3	0
Nemophilla insignis	(blue)	— N. atomaria, var. alba		1	0
Plumbago capensis	(blue)	— Phlox Drummondii .	(crim.)	2	0
Sollya heterophylla	(blue)	— Fuchsia, in varieties		2	0
Verbenas, in varieties.					

In conclusion, we shall just remark that those plants usually denominated "florists' flowers" are better in beds by themselves, than when grouped with other plants, both with respect to management and general appearance.

THE WEATHER FOR JUNE.

During some of the last days of May, the same dry weather continued which had been characteristic of the greater part of that month. On the evening of the 28th there were cirri; and the following day was cloudy in the morning, but cleared up by mid-day, and the barometer kept rising, though only to a small extent. On the 30th there were also morning clouds, consisting chiefly of cirrostratu, which reeled about and changed their forms apparently by atmospheric action only, and without any regard to the surface wind; but they melted away against mid-day. On the last day of May, which was that of new moon, the barometer had fallen a very little; and light cumuli made their appearance early in the morning, but soon melted away, and the day was uncommonly bright and the warmest in the month, the mean temperature being 63½°, and the highest 76°. On the 1st of June, the barometer again fell a little; but about 2 P. M., the thermometer rose to 79°, and the day was the warmest that had yet occurred during the season. At the same time, however, there was that extreme transparency in the atmosphere, and clear perception of minute and distant objects, which showed that evaporation was beginning to be suspended; and on the following day there were lightning, thunder, and rain; and the fall of the latter upon the heated surface of the ground produced an evaporation which reduced the temperature 18° below what it had been only two days previously. The 3d and 4th were dull and rainy, and so were the morning and evening of the 5th; but nothing occurred which could be regarded as a confirmed rain storm or breaking of the weather,—which seemed a sort of blending of the ordinary characters of April, May, and June, in which, however, the last greatly prevailed. After this, the weather continued fine, with occasional light showers, though the duration of these was short as compared with that of the clear and dry weather. The atmospheric tide at the full moon, which happened on the 17th, produced no great effect on the atmosphere, and what it did produce came on very slowly. This might in part have been expected from the great difference in declination between the sun and moon, which threw the poles of the aërial spheroids

produced by their attractions to a considerable distance from each other Occasional showers still continued to fall, but with large intervals of fine weather; and though the nights became a little chilly, the wind occasionally blew cold and hollow, and evaporation was much diminished, all these indications were too slight for leading to the conclusion that there would be any very great change in the weather. From the 19th to the 22d there were occasional showers; and on the 23d, there fell showers of pretty large hail stones upon the cold and elevated grounds; but these were limited in their extent, and brief in their duration; and though the atmosphere very often had a hazy appearance in the mornings, accompanied by light showers, the weather was upon the whole very fine.

Such are the leading points of the weather for June, at least in the neighbourhood of the metropolis, where, though the hills are of trifling elevation, the great diversity of the tertiary strata occasions a very considerable difference of climate. From these characters of the weather, we need hardly say that the month has been altogether highly favourable to vegetation and its culture, in all their departments. The season, so far as it has advanced, has passed off with remarkably little blight, except in the most unfavourable situations; and caterpillars have done comparatively little damage in the gardens. Aphides have made their appearance, though in no great abundance; and, upon the whole, we may say that vegetation has suffered much less than the average from insect depredations. This is easily accounted for. The heavy and continued rains in the latter part of the preceding summer and the autumn, destroyed vast numbers of the parent insects, both of those which deposit their ova on vegetables, and those who do so in the earth. The continuance of the rainy weather until the spring was pretty far advanced must have destroyed the principle of life in many of these deposits; while the steady drought which followed, though it made the progress of vegetation comparatively slow, prevented any of those violent alternations of strong growth and sudden check, which call forth the little destroyers in such myriads when the season of early vegetation is more than usually varied.

From the circumstances which have been enumerated, it may at once be inferred that, though the yield of some plants may not be so bulky as in less steady seasons, the quality of all will be superior. The season has been favourable for healthy flowering, and also for ripening and imparting flavour to the early fruits. It has also been, and continues an excellent hay season; for though the swathe from some grounds is not heavy, the quality will everywhere be very superior, in consequence both of the healthy condition of the grasses, and of the favourable weather, which has been such as neither to soak nor to parch the hay in the swathe. Our limits are reached, however; and we must delay our further remarks till next month.

CALENDAR FOR JULY.

Stove.—As the principal thing to be attended to here is keeping the plants (and the house generally) clean, fumigate occasionally. Hard-wooded plants are greatly improved in appearance and health by frequently sponging the

leaves both on the top and under-side with clean water:—this applies to both stove and greenhouse plants. Give a good supply of air on fine days. Syringe frequently, taking care not to wet the flowers, or it will spoil them. Re-pot all plants that require it.

GREENHOUSE.—Camellias are now setting bloom. They must not be allowed get dry or yet too wet; and they should be shaded from the intense heat of the sun; as in the one case the bloom buds will fall, and in the other the foliage will be scorched and spoiled. Cuttings of Geraniums should now be struck; also all other succulent plants. Ericas, as before. Air should now be let in all night, say one-third of the quantity given in the day. Attend to the plants out of doors; fasten the tall ones to a stake driven in the ground at the back of the plant. Keep them well watered; also those in the house. Oranges, Citrons, Lemons, and Camellias, may now be budded.

FLOWER GARDEN.—Take up Tulips: lay the roots in a *shaded* place to dry—when thoroughly dry, clean them and put them away in boxes or drawers. This is a good time to bud roses:—the Chinese varieties do best on the Common China, the others on stocks of the Wild or Dog Rose. Pipe Pinks under a handglass; shade them from the sun, and keep them just moist. Sow Picottees, Pinks, Polyanthus, and Pansies, and all biennials. Carnations will require a great deal of attention now:—keep them neatly tied up, and as the buds open, split the calyx equally on all sides; if the bloom does not open regularly, tie a small piece of bass or silk round it. Ranunculus should have all the weather; and immediately the foliage is dry, they should be taken up, or the roots begin to grow again, which is the principal cause of so many failures; the roots should then be placed in a dry shed or room, out of the sun, till they are fit to put away:—this manner of drying roots or bulbs is far preferable to the old method of drying in the sun, inasmuch as the object is attained more gradually, and consequently more effectually. Dahlias must be attended to:—thin them out and keep them tied up neatly—where blooms are required for showing, they must be shaded. Hyacinths, Crocuses, Narcissus, &c. should now be taken up where any change is desired to be made. Carnations should be layered about the time the flowers begin to go off.

ON THE FLOWERS FIGURED IN NUMBER IV.

BY R. PLANT.

TROPEOLUM MAJUS ATROSANGUINEUM.

THIS deservedly admired inhabitant of our flower borders is a native of India. Seeds of it were received in England about the year 1832.

It is a most profuse bloomer; and of very easy culture, requiring the treatment of a half-hardy annual. The genus *Tropeolum* is one of the most ornamental we possess, the different species affording a constant supply of flowers during the entire spring and summer. The species *Tricolor*, *Tricolor grandiflora*, *Brachesyres*, and the old Double Nasturtium, require the assistance of a greenhouse, where, from their peculiar thread-like manner of growing, and brilliant flowers, they are very striking objects. *T. Canariense* is a very rapid climber and abundant

bloomer, particularly adapted to out-doors trellis. *T. tuberosum* has, for the last two years, attracted a great deal of notice from the difficulty experienced in getting it to bloom. It may be done by first getting the plant into a strong growing condition by planting it in rich earth, and then suddenly shifting it into very poor earth, such as old lime rubbish and poor earth from a common. It will do either in a conservatory or planted out in a warm border. It is a remarkable and interesting fact, that the flowers of this genus may be seen (if closely observed) on a summer's evening to emit small electrical sparks or threads of light.

NEMOPHILA INSIGNIS.

This pretty little annual is an especial favourite wherever grown. We can readily conceive the delight and surprise it must have inspired when first seen in its own wild prairies; since which it has become so well habituated to our climate, that, if allowed to stand, it will seed and rise again without any trouble,—and indeed the plants are then stronger, and bloom earlier than when artificially raised. This, with the varieties *atomaria*, of which there are two, (the one being a pure white, thickly studded with minute black spots, and the other a light blue with small white spots,) are well adapted for early flowering. In an airy greenhouse or cold frame, they will stand the winter, and produce their beautiful blooms as early as February:—indeed we have had them at Christmas. For this purpose, small plants should be selected from the borders of the flower garden, in September, at which time there is generally plenty of self-sown plants. To bloom in summer, seed should be sown about the beginning of March in the open border, choosing a shaded situation; and a small sowing once a fortnight till the middle of April will ensure a succession of bloom all summer. *N. aurita* is an older inhabitant of our island. It is a deep lilac colour, of rather coarse habit, but a good border variety.

LOBELIA HETEROPHYLLA.

The genus *Lobelia* has already been noticed in part in the Florist's Journal; but much remains of this extensive family. It comprises upwards of twenty species, only two of which, *L. Dortmanna* and *L. urens*, are natives of England; the others are found in every quarter of the globe. Our present subject, *L. heterophylla*, is a fine greenhouse herbaceous plant, producing its vivid coloured flowers from the axils of the petiole, or leaf-stalk; and, what is very desirable, it is an early spring flower. It may be increased by cuttings or seed, and is easily kept through the winter, taking care that it is not over watered.

There have been some interesting additions made to this genus lately. Among the rest, *L. ignea* and *L. ramosa* stand most prominent; the first is a native of Mexico,—seeds having been received by M. Makoy of Liege, and from thence it came to England. At first it was considered more tender than the other Lobelias; but since it has been found equally hardy, and will do well planted in the open border, giving it the protection of a greenhouse or cold frame during winter. *L. ramosa* is of similar habit to the species figured. It emanated from the Horticultural Society's Gardens, and is also a native of Mexico. It is strikingly singular in its manner of blooming, the flowers being branching, as the generic name implies they are: they are produced alternately over each other.

THE

FLORIST'S JOURNAL.

JULY 1, 1840.

VISITS TO NURSERIES. NO. III.

ROYAL GARDENS, KEW.

WE take some shame to ourselves for not making these gardens, which are the *princeps* ones in this country for the collection and cultivation of rare and interesting plants, more especially those of foreign and distant climates, the object of our first visit. But the subject of them, taken altogether, in its progressive history, its present state, and we fear also in some of its future prospects, is of such deep and varied interest, that we could not at once make up our minds to the consideration.

Kew is altogether a delightful spot, and especially suited for those purposes to which it has so long, in as far as the gardens are considered, been devoted. We have nothing to do with any other of the numerous recollections which the mere mention or thought of it calls up,—with the doings of kings and princes, the labours of philosophers, or the performances of artists, of which it has been successively the theatre. Our province is to look upon it as a place of plants and flowers, and in this respect it is, above all places within the four seas, sacred ground,—ground sacred to botanical science, and enriched by the fruits of the exertions of some of the most liberal, and industrious, and able, and successful promoters of the knowledge of the vegetable world, that ever adorned England or any other country.

Even the locality has its charms; for it consists of a very gently undulated surface, bordered on one side by one of the

sweetest bends of the all fertilizing and enriching Thames. This circumstance appears at a very early period to have drawn the attention of men fond of nature.

Three hundred years ago, Kew was the residence of Dr. Turner, the herbalist, whose collection of plants was there; and subsequent residents, all devoted to Botany in some way or other, also collected many plants, and planted rare trees, some of which yet adorn the Arboretum and the adjoining parts of the pleasure grounds; and when George II. was Prince of Wales, his secretary possessed the mansion, and kept up the style of the garden. Soon after this a long lease of it was taken by Frederic, Prince of Wales, father to George III.; and, as he was a warm admirer of plants, and a great favourite with the liberal party in the country, he received many of the plants which the Duke of Argyle had collected to Wotton, with so much assiduity and judgment. After the demise of the prince, the princess dowager not only continued her attention to the gardens, but began the botanical garden, which, with the exception, perhaps, of the physic garden of the apothecaries at Chelsea, was the first in the kingdom, and the only one which has, up to the present moment, been established by royal patronage. It is true that this princess was not queen; but her son, George III., was heir apparent, and became purchaser of this spot, which had been so much admired by his mother.

About this time, that is, toward the middle of last century, the talents and example of Philip Miller, of the Chelsea garden, had given a new impulse to the science of plants, and embued young and aspiring gardeners with a desire of doing something more than growing a cabbage or a cauliflower. High among these meritorious young men stood the late William Aiton. To him the laying out, furnishing, and attending of the botanical and other gardens at Kew were committed; and the event showed that the choice could not have fallen on a better. We cannot say as much for the structures designed by Sir William Chambers; but stones, and bricks, and mortar, and deal boards, and lead, and lifeless and lumbering matters of that kind, fortunately lie without our province, so that we cannot even criticize them without being guilty of invasion.

The frequent residence of George III. at Kew tended greatly to the advantage of the gardens there. We do not mean to say

that that monarch was skilled in botanical science; but he had acquired a taste for the gardens from the example of his mother; and his partiality for vegetables continued, though it took an agricultural, rather than a floricultural, direction. In such cases, however, "the king's *name* is a tower of strength;" of more real value, perhaps, than if he were deeply learned in them; for persons of lofty station should be the patrons of men of science, and not the rivals, because, if subjects are required to worship the wisdom of a monarch, it tends far more to warp their judgments than when they have simply to be grateful to him for his kindness. Other patrons of science were attracted by the royal presence; and foremost among these stood Sir Joseph Banks, having no pretensions to profound knowledge himself, but excellent tact in finding out and great liberality in rewarding those who had. To the discernment and liberality of Sir Joseph, we owe the Bauers, the finest botanical anatomists and delineators that ever this country possessed, and also Dr. Robert Brown, beyond all measure our first physiological botanist; and if minor men—men not fit to hold a candle to these, or endure its light—shall dare to menace the existence of this grand living monument of Sir Joseph's eminent services, they ought to be stripped of their supplemental letters, and all their other extraneous integuments, and have their naked bodies, standing in their own strength and merits as mere men, birched with the *Daoun setan*, or "Devil's leaf," until they tingle again at every pore.

Until the general hostility in which the world was engaged withdrew attention from such matters, Cook and all his successors brought a rich store of plants from every land and every isle of the ocean, and Kew Gardens were the grand receptacle; and its collection is still without a rival in the country, though haply its merits have been less loudly trumpeted forth than those of some inferior places. Mr. Aiton, jun., became principal horticulturist to the king upon the death of his father in 1793; and though the times in which the lot of his labours has been cast have been less auspicious than those of his father, and his attention has been greatly distracted by the extensive works done at Windsor and the other royal gardens and parks, of which Mr. Aiton had been made director by George IV.; yet no gardens can be in finer order than those of Kew are at the present time, and no man in office can be more attentive—courteous indeed—to visitors of all ranks,

or more discriminating in the selection of those under him, than Mr. Aiton.

Here we may remark, and it is worthy of attention, that these are the only gardens containing a valuable collection which are freely open to the public,—for we are not sure that the physic gardens at Chelsea are open, even to those compounders of simples who have paid their fees, and so passed muster at Apothecaries' Hall. With the other horticultural and botanical gardens, as well as the zoological ones, which usually have horticultural decorations, the case is nearly the same. They are the property of certain proprietors, just as much as private gardens are; and the public generally have no title to be admitted to them without paying fees; neither have the legislature any power of enforcing such admission,—which power would be very unjust.

It must not be supposed that, by this observation, we mean to find any fault with those establishments. On the contrary, we admit that they do much good in the advancement of science, and in improving the knowledge, and taste, and morals of the people. But they have nothing national in them; and whatever good they may do is founded in part, and no inconsiderable part, upon the mercantile principle of gain to the proprietors, and salaries for those who have the management. But Kew Gardens are public property,—the botanic one being open for a reasonable time every lawful day; and though the pleasure grounds are open only on Sundays from Midsummer to Michaelmas, they are a scene of mere amusement, and not of instruction. Without any reference to the history of the gardens, or by what gradations and by whom they have been brought to their present state, the public have great interest in their preservation, and in their receiving every improvement of which they are susceptible. They are within a very short distance of London; the trip to them, either by land or by water, is short and pleasant; and the means of conveyance frequent and cheap; and therefore, one would suppose that few intelligent visitors of London, especially those making their visits in the summer, would omit Kew Gardens in the list of objects desirable to be seen. The season, indeed, is of less consequence than in ordinary gardens; because the tropical plants and those of the southern hemisphere, of which the number is great and the quality excellent, are almost equally attractive at all seasons. Notwithstanding these favourable circumstances, but few British men

of talent visit those gardens; for the number of them is, perhaps, not greater than that of foreigners.

This neglect on the part of the public, together with scanty funds, and the constant occupation of the director by the duties of other offices to which he had been appointed by his sovereign, rendered it impossible that he could pay much attention to the botanic garden; and, as he was obliged to employ his assistants in preparing supplies for Windsor, the whole system was paralyzed, and the public indifference increased. When William IV. came to the throne, a considerable portion of the sum annually allowed for Kew Gardens was taken away; but much of the burthen being removed from Mr. Aiton and those under him, there was an immediate improvement in the state of the gardens, which advances with accelerated progress at the present time.

In the mean time, however, a change had taken place in the system of horticulture; and private individuals and societies had begun to form large connexions, during the time when it was not possible to attend rightly to Kew. The consequence was, that these drew that attention which Kew had enjoyed during the latter half of last century; and as people are always more ready to find fault with what they suppose to be inferior, than to learn the cause, and find a remedy for the inferiority, the gardens began to be written against, sometimes in no very measured terms. According to the present system, these gardens are treated something after the manner of a beggar going about for an alms. The Office of Woods does the repairs; the wages, coals, and other necessaries are voted in the civil list, and distributed by the lord chamberlain; and the collectors of plants are paid, and the expenses of their collections defrayed, by the Admiralty. Thus there is what the Scotch lawyers most appropriately term "a confusion of actions," in the government superintendence and support; and this, of itself, must go far in paralyzing the whole establishment. But this cause, as well as the former ones, was overlooked; and all that was found or fancied to be amiss in the gardens was charged directly against Mr. Aiton, and those under him.

The result has been a very common, though often a very effectless one of late years,—the appointing of a Commission, and the giving in of a Report. These commissions, by the by, appear to be in a pretty fair way of reducing the word "commissioner" to the same level as in France, where it is applied to a common porter or

messenger. This commission consisted of Dr. Lindley, of the horticultural gardens, Mr. Paxton, of the Duke of Devonshire's gardens at Chatsworth, and Mr. Wilson; the first and second of whom, at least, are a sort of rivals to the director at Kew. Dr. Lindley is, we believe, the real author of the report, which tells what are in the gardens, the condition of the several plants, the conduct of those who have the management; and offers certain proposals for what are said to be improvements. With the treatment of the plants themselves no fault is found, for they are said to be in excellent condition; but want of room is complained of, which is obviously the fault of those who find the funds, and direct their outlay. Great objections are made to the naming of the plants; not because any of them are misnamed, but because they have been chiefly named by Mr. Smith, who is only the foreman, and has a small salary, and consequently is not scientific enough, or possessed of a sufficient "means" for this (in the commissioners' estimation) important part of botanical economy. Now, though the naming of plants were a matter of far more consequence than it is, we do not see how the smallness of a man's salary should prevent him either from doing it properly, or from being possessed of science. We have often observed high salaries having a relaxing effect on a man's exertions, but never of small ones having the same. Great salaries, like great and ostentatious names, have a tendency to make the baser metals pass current as gold. Besides, the nomenclature of plants is a confusion worse than Babel, —a perfect abomination upon earth; for nine-tenths of the names have not only no meaning, but they consist of the surnames of men of all nations, transformed into monkeys by sticking Greek and Latin terminations to their hinder ends. The Nominalists and the Realists once bred not only great anarchy in the metaphysical world, but were the cause of making warriors handle the physical tool in the battle field. We strongly suspect that there are nominalists and realists in botany; and we are free to confess that we prefer a botanist who really understands their physiology, their habits, and modes of treatment, and their useful properties, to one who spends all his life in calling them names. This part of the special pleading (pleading for some purpose into which we have no right or wish to inquire) must, therefore, fall to the ground.

It appears, indeed, that the reporters or reporter could find no fault whatever with Kew Gardens, except the want of room in the

stoves and green-houses, and that the names of the plants had not been affixed by some one eminent in botanical science; for they do not, as we have said, allege that any of the names are wrong. And we may remark, that, in the very important department of the grasses, which are of more value, in a national point of view, than all the other families taken together, the nomenclature has been so well managed by Mr. Smith, that a very short time spent in the department allotted to these plants would suffice to enable the farmer or the grazier to know the more valuable ones at sight. Now, it must be admitted that, if we are to have a national botanic garden, instead of one appended to the royal household, as Kew gardens have hitherto been, the plants most useful to the country should be preferred, and not those most curious to learned professional botanists, who, like the men of Athens, are always seeking after "some new thing"—we beg their pardon, some new name. The species of plants are as old as the creation; and, though Dr. Lindley, somewhere in his multiplicated writings, hints that there is a sort of sub-normal or semi-organic matter which lingers on the margin, waiting the wind,—and if the said wind shall blow it landward, it becomes a lichen, but if sea-ward, lo and behold it is a fucus!—yet, notwithstanding this, and though the Doctor were aided by "the prince of the power of the air," we shall not believe that he ever originated a new species, until we actually see it done, and have analyzed the process.

The reporters hint that, if her Majesty pleases, it would be better to relieve the lord chamberlain of his control of these gardens, probably for the purpose of getting them placed in more manageable hands;—but this is not stated. Next come the alternatives, in the event of the chamberlain's relinquishment: the gardens should at once be abandoned (to whom, or for what, is not said), or they should be taken for public purposes.

It is upon the latter of these alternatives that the suggested changes are grounded. The postulata are: that a botanical garden for study is wanted in the neighbourhood of London; and that the gardens in the British colonies and dependencies have their utility sadly diminished by the want of proper superintendence and control; and the corollary from these postulata, the latter especially, is, that there should be a sort of botanical pope and conclave at Kew; and that the bulls of his vegetable Holiness should trot forth with anathemas thundering at their heels, and

enforce the most implicit obedience from every botanist, wherever Britain holds or controls a foot of land. If this is *freedom* of science, it is exactly the counterpart of King James's "free monarchie," under which all the nation were to be slaves of the king, and he the slave of his own passion and caprice.

In supplement to this mighty foreign domination, which twines round the globe in a transcendental curve, from Belise to Paramatta, some 233° in longitude, the report goes on to recommend the taking in of 30 acres of the pleasure grounds, and the expenditure of some 20,000*l.* upon the gardens, and the swamping of the Chelsea gardens, to add to the renown of this (to be) most scientific and splendid establishment. Then come the details, which are :—1. To secure at least two specimens for the gardens. 2. To supply the other royal gardens [with what? we would ask]. 3. To sell all disposable duplicates, annually, by auction ; the proceeds of this indeterminate ; but "the value of the plants would much depend upon the opinion which the public might entertain of the chief officer of the garden, whose business it would be to determine the names of the plants to be sold." [Here we would ask Dr. Lindley, if the public would give one farthing for a toad-stool, though even he set it down in the auctioneer's list as a Rafflesia Arnoldi.] 4. To propagate nothing except what is wanted for government purposes, and so far as the raising new plants from seed can be called propagation. [Considering from whom it originated, this proposal must have a meaning, but those who find it out must be wise indeed.] The chief officer to have a power of making exchanges with private individuals, and foreign gardens, after the wants of the British public are satisfied.

Such is the substance of the proposed means for elevating Kew Gardens to the very highest degree of botanical eminence ; but how these means are to effect their purpose is, and we fear must remain, a mystery. We do not like the huckstering sale of spare plants annually, for it is unworthy of the British nation. The power of the chief officer to make exchanges is tantamount to giving him what might be made a very lucrative barter. The proposals are also inconsistent with each other; for the exchanges are not to be made till "after the wants of the British public are satisfied ;" and yet there is no provision for granting to the public a single plant, or any thing else. Her Majesty's gardens are the only ones to be supplied ; and nothing is to be propagated,

" except what is wanted for government purposes." The public are, in fact, to have no voice or interest in the matter, and yet the garden is professedly to be for the public.

Of the *body* of the report we may speak in the words of Dr. Lindley :—" One might call it a provisional creation waiting to be organized ;" for, as it is, it comes exactly to Crambo's abstract idea of a lord mayor. Of the spirit, we must say a few words, but they shall be very few. There runs through the entire report a querulous disposition to find fault with Mr. Aiton, and to insinuate that he ought not to have the direction of the gardens ; although it is as notorious as the sun at noon day, that if any thing has been wrong, it has been solely owing to the manner in which he has been stinted in accommodation, and in time ; and we question whether, if so stinted, any other man could have preserved the plants in that clean and healthy condition, and vigorous growth, which they display at the present moment. Instead, therefore, of any cause of complaint, except against parties over whom those who were labouring silently and successfully in these gardens had no control, there are just grounds of high commendation. More than this, there is something to be remembered, —something for which the nation and the world ought to be grateful. It is here that the grand impulse to botanical pursuits in this country was given ; and Mr. Aiton, sen. was the architect who reared the structure, and was the main cause of concentrating the materials there. Ninety years have passed away since he began those labours, and they have been continued to the present moment by himself, and his son. The members of the commission must know this. And they are botanists ; and that botanists should name the name of Aiton with any thing but gratitude, is like rapacious and ruthless farmers driving the ploughshare through the sepulchres of their fathers, for the lucre of another bushel of grain.

FLOWER EXHIBITIONS,

AT FLORAL SOCIETIES, OR ASSOCIATIONS.

AUTHENTICATED Reports for this list, which will be continued from time to time, and which is intended to embrace all parts of the United Kingdom, are respectfully solicited, and will meet with

due attention. It would also be of great advantage, if the reporters would state what influence the exhibitions appeared to them to have in the districts over which their influence may be supposed more immediately to extend. There is another question closely connected with this, or rather arising out of it—the share which those exhibitions, and the love of flowers resulting from them, appear to have in improving the mental and moral condition of the people. But this is a very nice question, and the investigation of it would require very judicious discrimination.

April 27. BIGGLESWADE. Spring Show at the New School Room. Prizes awarded.

Auriculas, green-edged...1. Mr. Giddings, Page's Champion; 2. Mr. Garret, Booth's Freedom; 3. W. Hogg, Esq., Lovely Anne.
Grey-edged...1. Mr. Garret, Ringleader; 2. W. Hogg, Esq., ditto; 3. Mr Webster, ditto.
White-edged...1. Mr. Webster, Tailor's Glory; 2. W. Hogg, Esq., ditto; 3. Mr. Geddings, ditto.
Self-coloured...1. Mr. Franklin, Metropolitan; 2. F. Hogg, Esq., Whitaker's True Blue; 3. Mr. Webster, Lord Primate.
Polyanthus...1. Mr. Garret, Alexander; 2. Mr. Pullen, Wood's Gold Lace; 3. Mr. Webster, ditto.
Best Stove Plant...Mr. Webster, Cactus speciossimus.
Best Greenhouse Plant...Mr. Webster, Azalea indica hybrida; second best ditto, F. Hogg, Esq., Azalea indica alba.
Best Hardy Herbaceous Plant...Mr. Webster, Phlox Verna.
Pansies, best twenty-four blooms...1. Mr. Garret; 2. Mr. Webster; 3. F. Hogg, Esq.
Best twelve blooms...1. Mr. Garret; 2. F. Hogg, Esq.; 3. Mr. Webster.

April 29. STAMFORD. First Show, at Handwell's Hotel. Prizes awarded.

American Plants...2 Azalea indica, 2 Rhododendron pontica, 1 Scarlet Azalea, and 1 Fuchsia fulgens, Countess of Lindsey.
Greenhouse and Stove Plants...Correa speciosa, Euphorbia splendens, Fuchsia fulgens, Erica ovata, Kennedia nigricans, Vica rosea, Ardesia crenalata, Pimelia decussata, Brugmansia arborea, Indigofera Australis, Cineraria bicolor, Anthocerci viscosa, Vinca alba, Euphorbia jaquiniflora, Deutzia scabra, Erica vestita alba, Acacia armata, Lord Willoughby de Eresby.
Geraniums...Hericartianum, Chelseanum, Queen Bess, Washington, Speculum mundi, Perfection, Splendissima, Marchioness of Exeter.
Ditto, the best Dealer's Stand...Mr. Algar.
Ditto, the best Seedling...Mrs. W. Harper.
Cactuses...Cactus Jenkinsonia, Cactus speciosa, Cactus Edesii, Cactus speciosissimum, Lord Willoughby de Eresby.
Pansies, Dealers' Prizes ...1. Wellington, Masterpiece, Pomona Supreme, Don Juan, Mrs. Cheney, Mulberry, Joan of Arc, Belzona, Valteria, Lady Peel, King of Yellows, Duke of Northumberland, Anna Maria, Lord Glames, Amato, Grand Monarque, Diana Supreme, Duke of Wellington, King of Oude, Patriot, Mr. R. Brown; 2. Diana Supreme, Lady Clements, Superb Lilac, Capt. Ross, Rosette, Masterpiece, Emma, Adelaide, Radiata, Phyllis, Queen of Yellows, Helena, Allen's Minerva, Antiope, Mischance, George the Fourth, Amato, Thomsonia, Claude, Queen of Scotts, Mr. Algar.
Ditto, Amateur's Prizes...1. Amato, Harry, Macbeth, Sterne's Maria, Lady Peel, and four Seedlings, Mr. J. Mills; 2. Enchantress, Vesta, Amato, Victoria, Beauty of Edmonton, Splendid White, Pasta, Joan of Arc, Bronze, Nabob, Melon's Beauty, Mrs. Worsley.
Extra Prizes...Bilbergia zebrina, General Johnson. Cactus speciosissimum, Cactus speciosa, and Roses, Mrs. M. W. Jackson.
Fine grown Plants, and Collection of Geraniums...Consisting of Chef d'œuvre, Anna Boleyn, Fosteria rosea, Lord Combermere, Garth's Perfection, Glorianum, Splendissima, Sir John Trollope.
Bouquet of tender Flowers...Marchioness of Exeter.
Clianthus puniceus...Ditto.

Auriculas...1. and 3. Mr. T. Trobe, Guyzance, for Dormand's William IV., and Salter's Garland; 2. Mr. A. Gowens, Felton, for Lancashire Hero; 4. Mr. J. Lee, for General Elliot; 5. Mr. W. Harrison, Felton New School, for Dormand's Don Pedro.

Hyacinths...1. Mr. Gowen's for Groot Voorst; 2. Mr. Reid, gardener to the Rev. James Allgood, Felton Vicarage, for Tarquin; 3. Mr. Trobe, for Waterloo; 4. and 5. Mr. Harrison, for Lord Wellington and Alamode.

Polyanthuses...1 and 4. Mr. Trobe, for Pearson's Alexander and Fair Ann; 2. Mr. Riddle, gardener to J. Hodgson Hinde, Esq., M.P., Acton House, for Barkess's Bonny Bess; 3. Mr. Crossling, gardener to George Burdon, Esq., Felton Park, for Black and Gold; 5. Mr. Reed, for Prince of Beadle.

An extra prize was also awarded to Mr. J. Hudson, Felton, for the best Seedling Polyanthus, which he named Hudson's Anna Maria.

April 29. CHESTER. Prizes awarded.

Auriculas...Premier Prize, Mr. Barrow.

Green edged...1. Mr. Barrow, Freedom; 2. Mr. Evans, Seedling; 3. H. Hesketh, Esq., Glory of Oldham; 4. Rev. P. W. Hamilton, King; 5. Mr. Barrow, Laddie; 6. Rev. P. W. Hamilton, Bang Up; 7. Mr. Evans, King.

Grey edged...1. Mr. Barrow, Privateer; 2. Ditto, Ploughboy; 3. J. Fielding, Esq. Ringleader; 4. Rev. P. W. Hamilton, Unknown; 5. Mr. Evans, Ringleader; 6. Ditto, Bagslate Hero; 7. Rev. P. W. Hamilton, Lord Bridport.

White edged...1. Mr. Evans, Regulator; 2. Ditto, Regular; 3. Ditto, Conqueror; 4. H. Hesketh, Esq., Lancashire Lass; 4. Mr. Delworth, Pillar of Beauty; 6. Mr. Barrow, Chancellor; 7. Mr. Delworth, Bright Venus.

Selfs...1. Mr. Evans, Flag; 2. Mr. Barrow, Apollo; 3. Mr. Evans, Lord Primate; 4. Ditto, Lord Lee; 5. Ditto, True Blue; 6. Mr. Barrow, Ned Ludd; 7. Mr. Roberts, Unknown.

Seedling Prize...Mr. Barrow.

Shaded Selfs...1. Mr. Evans, King of the Alps; 2. Mr. Morris, Unknown; 3. J. Uniacke, Esq., Unknown; 4. Mr. Evans, Seedling; 5. Mr. Roberts, Miss Brooke; 6. Mr. Evans, Seedling; J. Uniacke, Esq., Unknown.

Polyanthuses, dark ground...1. Mr. Barrow, Cheshire Favourite; 2. Rev. P. W. Hamilton, Alexander; 3. Mr. Evans; 4. Rev. P. W. Hamilton, Princess Royal; 5. Mr. Barrow, Bang Up.

Best Seedling ..Mr. Evans.

Red ground...1. Rev. P. W. Hamilton, George the Fourth; 2. Ditto, Jolly Dragoon; 3. Ditto, Seedling; 4. Mr. Barrow, Seedling; 5. Mr. Evans, Maypole.

Best Seedling...Mr. Evans.

Hothouse...1. Messrs. F. and J. Dickson, Cyrtopodium species; 2. C. Potts, Esq, Crinum amabile; 3. Messrs. F. and J. Dickson, Gongora atropurpurea; 4. C. Potts, Esq, Cactus Jenkinsonii; 5. Rev. P. W. Hamilton, Cactus speciosa; 6. Messrs. F. and J. Dickson, Cactus Akermanii major; 7. C. Potts, Esq., Thunbergia alata.

Greenhouse...1. Messrs. F. and J. Dickson, Rhododendron arboreum rubra; 2. Lady Stanley, Tropæolum tricolor; 3. Ditto, Erica perspicua; 4. Ditto, Borronia serrulata; 5. Ditto, Erica mundata; 6. Messrs. F. and J. Dickson, Clematis azurea grandiflora; 7. Lady Stanley, Erica Hartnellii.

Hyacinths...1. Messrs. Edwards, Walker, and Co., Nimrod; 2. Ditto, Grand Vainqueur; 3. Ditto, L'Amie de Cœur; 4. Ditto, L. Condem; 5. Ditto, Pigeon.

Geraniums...1. Rev. P. W. Hamilton, Joan of Arc; 2. Messrs. Edwards, Walker, and Co., Speculi mundi; 3. Rev. P. W. Hamilton, Tam O'Shanter; 4 Messrs. Edwards, Walker, and Co, Parker's Triumphant; 5. Miss Brittain, Dennis's Perfection; 6. Ditto, Fosteriana rosea.

April 29, *and May* 15. VALE OF EVESHAM. First and Second Shows. Prizes awarded.

Auriculas, green-edged...1. Wood's Lord Lascelles, J. Clark, Esq.; 2. Atkins's Defiance, Mr. Drury; 3. Galloway's Glory, Wm. Barnes, Esq.

Ditto, grey-edged...Kenyon's Ringleader, Wm. Barnes, Esq.

Ditto, white-edged...Barlow's Morning Star, Wm. Barnes, Esq.

Ditto, selfs...1. Barnes's Viscount Canterbury, Wm. Barnes, Esq.; 2. Bury's Lord Primate, ditto.

Ditto, Alpines...1. Barnes's Prince George, Wm. Barnes, Esq.; 2. Barnes's Splendidissima, ditto; 3. Barnes's Perfecta, ditto.

Polyanthuses, dark...1. Park's Lord Nelson, Sir C. Throckmorton; 2. Pearson's Alexander, Wm. Barnes, Esq.

Ditto, red...1. Seedling, Mr. R. Whitford; 2. Buck's George the Fourth, Wm. Barnes, Esq.

The best Bouquet...General Marriott.

Stove, or Greenhouse Plants...1 Eutaxia myrtifolia, J. Clark, Esq.; 2. Cereus Ackermannii, Edward Rudge, Esq.; 3. Cinerea, J. Ashwin, Esq.

Hardy Plant...Rhododendron ponticum, General Marriott.

May 7. MARKET DRAYTON. At the Corbet Arms Hotel. Prizes awarded.

Best Pan of Auriculas...Mr. Arkinstall, for Kenyon's Ringleader, Black Joke, Lee's Venus, and Howard's Nelson.

Green-edged...1. Booth's Freedom, Mr. W. A. Bradbury; 2. Unknown; 3. Wallace's Blucher, Mr. Arkinstall.

Grey-edged...1. Grimes's Privateer, Mr. W. A. Bradbury; 2. Lovely Ann, ditto; 3. Kenyon's Ringleader, Mr. Arkinstall.

White-edged...1. Popywell's Conqueror, Mrs. Twemlow; 2. Admiral Gardener, ditto; 3. Clegg's Lady of Honour, Mr. Arkinstall.

Selfs...1. Redman's Favourite, Mr. Arkinstall; 2. Flora's Flag, ditto: 3. Apollo, Mr. W. A. Bradbury.

Polyanthus...Premier prize, Alexander, Mr. Peplow.

Darks...1. George the Fourth, Mrs. Twemlow; 2. Lord Crewe, Mr. Peplow; 3. Pearson's Alexander, Mrs. Twemlow; 4. William the Fourth, Mr. Arkinstall.

Reds...1, 2, 3, and 4. Seedlings, Mr. Peplow.

Pan of 12 Pansies...1. Messrs. Godwin, for Diomede, Earl of Warwick (Gaines's), Edgleaston Hero, Model of Perfection (Holmes's), Thompson's King, Widnall's Edina, Lord John Russell, Enterprise, Hon. Mrs. Adams, Widnall's Cato, Duke of Wellington, Rev. C. Hotham; 2. Mr. William Thornton, Exquisite, Lady Ann, Duke of Wellington, Frogmore Beauty, Unique, Mulberry, Princess, Donna Maria, Emperor, Coronet, Thompson's King, Enterprise.

Pan of 24 ditto...Messrs. Godwin, for Edgleaston Hero, Godwin's Brutus, Page's Splendour, Duke of Wellington, Thompson's King, Alicia, Mountjoy's Miss Hone, Corinne, Coronation (Lovegrove's), Birmingham Beauty, Enterprise, Hon. Mrs. Adams, Lady Mary, Duchess of Gloucester, Climax, Dowager Queen (Page's), Negro Boy, Tamworth Hero, Lovegrove's Miss Malcolm, Princess Elizabeth, Widnall's Belzonia, Rev. C. Hotham, Grand Duke of Russia, Masterpiece.

Calceolaria...Spotted Beauty, Miss Whitfield.

Greenhouse Plants...1. Messrs. Godwin, for Crotolaria purpurea, Erica Hylerida, Erica ventricosa coccinea; 2. Miss Whitfield, Polygala oppositifolia, Leccenaultia formosa, and Fuchsia Robertsii.

Tender Annuals...1. Miss Whitfield, for Schizanthus Hookerii; 2. Lobelia azurea.

Half Hardy Plants...Miss Whitfield, for Verbena Nievenii.

Best Cut Specimens...Mrs. Twemlow.

May 13. DUNDEE. First for the Season, at the Caledonian Hall. Prizes awarded.

Auriculas, best 3 green-edged...1. Charles Clark. Esq., Westfield Cottage, for Booth's Freedom, Taylor's Ploughboy, Wild's Black and Green; 2. Mr. James Lowe, Howard's Lord Nelson, Coldingham, Blucher, Sir Walter Scott.

Ditto, best 3 grey-edged...Charles Clark, Esq., Smith's General Bolivar, Warras's Union, Clegg's General Murillo.

Ditto, best 3 white-edged...1. Mr. James Lowe, Campbell's Robert Burns, Popplewell's Conqueror, Lee's Bright Venus; 2. Charles Clark, Esq., Taylor' Glory, Lee's Bright Venus, Hugh's Pillar of Beauty.

Best 3 Selfs...Charles Clark, Esq., Bury's Lord Primate. Flora's Flag, Martin's Eclipse.

Best 6 as variety...1. Charles Clark, Esq., Thompson's Bang Up, Wild's Lancashire Lad, Barlow's Morning Star, Lee's Talavera, Holder's Loyalist, Pearson's Badajoz; 2. Mr. James Jamison, Booth's Freedom, Ashworth's Rule All, Taylor's Ploughboy, Warras's Union, Kenyon's Ringleader, Clough's Do Little.

Best grey-edged Seedling...Mr. James Law.

Best variety of Seedling Alpines and Selfs, from open border...Charles Chalmers, Esq., Magdalen-yard.

Best specimen Bulb...Name unknown, from Van Diemen's Land, Charles Guthrie, Esq., Tay Bank.

Best variety of Calceolarias...1. Mr. John Hampton, gardener, 15 Seedlings; 2. Charles Clark, Esq., Dicksonia, Miss Gladston, Cestriensis, Mercury, Picta Coccinea, Sir John Thorold, and 3 Seedlings.

Pansies, best 6...Mr. David Wallace, gardener to Charles Chalmers, Esq., Magdalen-yard, Queen, Sophia Western, Royal Eagle, Venosa, Masterpiece, Emperor; 2. Not named.

Ditto, best 12...1. David Miln, Esq., Broughty Ferry, Richardson's Adelaide, Queen, Zoar, Rob Roy, Sophia Western, Masterpiece, Northern Lion, Duchess of Kent (new), The Doctor, Venosa, Hornsey Hero, Sir James Graham; 2. Not named.

Best 3 Seedlings...Mr. John Dick, Ballandean; 2. Mr. James Low, Maryfield.

Hyacinths, best 3 double and best 3 single...Mr. D. Wallace.

Best variety of double Wallflower...1. D. Miln, Esq.; 2. Charles Guthrie, Esq.

Best variety of single Wallflower...Mr. P. Brown.

Best double Seedling Wallflower...Ditto.

Greenhouse bloom cut-flowers...1. David Miln, Esq.; 2. Charles Clark, Esq.

Best 6 Herbaceous blooms...1. Charles Guthrie, Esq.; 2. Sir John Ogilvy, Bart.

Best 6 Greenhouse Plants...1. Charles Clark, Esq., Westfield Cottage, Cineraria Waterhousiana, Correa speciosa, Erica cermthoide, Poligala oppositifolia, Cineraria populifolia, Cineraria King; 2. Alex. Easson, Esq., Erica persoluta Coccinea, Erica maroonthia tubiflora, Cineraria floribunda, Correa speciosa, Fabiana imbricata, Oxylobium elipticum.

Best pair of Heaths...Alex. Easson, Esq., Vestita fulgida, Rubia Calix.

Best Greenhouse Climber...Charles Clark, Esq., Tropæolum pentiphyllum.

Specimen Plant, for rarity...1. Alex. Easson, Esq., Chorizema Dicksonia; 2. Mr. D. Wallace, Epiphyllum Jenkinsonia.

Best Specimen Plant for beauty...1. Sir J. Ogilvy, Bart., Purple Hydrangea; 2. Mr. D. Wallace, Epiphyllum speciosum.

May 13. DONCASTER. First Meeting, at the New Concert Room. Prizes awarded.

Best Pan of 6 Greenhouse Plants...Mrs. Elmsall, Pimelia decussata, Polygalla oppositifolia, Sollya heterophilla, Correæ rubroides, Kennedia monophilla, Metrosideras floribunda.

Best Orchideous Plant...Mr. R. Hall, Oncidium bifolium.

Best Stove Plant...1. Messrs. Crowder, Musa coccinea; 2. Ditto, Franciscea uniflora.

Best Greenhouse Plant...1. Messrs. Crowder, Hovea Celsii; 2. Mr. R. Hall, Chorizema varium; 3. H. Cooke, Esq., Boronia serrulata.

Best Cactus...1. Mrs. Elmsall, Hyltonia; 2. Dr. Bower, Cereus speciosissimus.

Best Exotic Climber...1. Messrs. Crowder, Kennedia coccinea; 2. Wm. Chadwick, Esq., Clematis Sieboldii.

Best large Red Pelargonium...H. Cooke, Esq., Belvidera.

Best Rose ditto...H. Cooke, Esq., Foster's Gem.

Best Oak-leaf ditto...H. Cooke, Esq., Fire King.

Best Crimson ditto...Mr. Stone, Dennis's Perfection.

Best Red ditto...Wm. Chadwick, Esq., Lord Hill.

Best Lilac ditto...Mr. Stone, Laura.

Best Pink ditto...H. Cooke, Esq., Lady Stanley.

Best Blush ditto...Mrs. Elmsall, Clara.

Best White ditto...H Cooke, Esq., Queen Bess.

Best Clouded ditto...Mr. Stone, Olympicum.

Best Camellia...1. Messrs. Crowder, Chandlerii; 2. Ditto, Donckelæria.

Best Erica...1. Messrs. Crowder, Hartnelli; 2. Mr. Hall, Perspicua nana; 3. Ditto, Ventricosa carnea; 4. Messrs. Crowder, Vestita alba.

Best China Rose...1. H. Cooke, Esq., Noisette Smithii; 2. William Chadwick, Esq., Yellow China.

Best Fuchsia...1. Messrs. Crowder, Fulgens; 2. Mrs. Milan, ditto; 3. Messrs. Crowder, Globosa.

Best Azalea...1. Messrs. Crowder, Ledifolia; 2. Mrs. Milan, Phœnicea.

Best Hardy ditto...1. Messrs. Crowder, Tricolor Jacobs; 2. Ditto, Pontica tricolor, Wolf.

Best Hardy Shrub...1. Messrs. Crowder, Edwardsia grandiflora; 2. Ditto, Andromeda pulverulenta.

Best Hardy Herbaceous Plant...1. Messrs. Crowder, Trillium grandiflora; 2. Ditto, Pæonia sabina.

Best Herbaceous Calceolaria...1. Mr. R. Hall; 2. Ditto, Aurea Aleppo.

Best Shrubby ditto...1. Mrs. Elmsall, Atrofuscum; 2. Dr. Bower, Loudonia.

Best Tree Peony...1. Mrs. Elmsall, Moutan; 2. Messrs. Crowder, ditto.

Best Mimulus...1. H. Cooke, Esq., Seedling; 2. Mrs. Elmsall, ditto.

Best British Plant...Mrs. Elmsall, Primula farinosa.

Best Narcissus...Messrs Crowder, Bulbocoidium.

Best Tender Bouquet...H. Cooke, Esq.

Best Hardy ditto...1. Mr. Gill; 2. Mrs. Webster.

Best Tender or Hardy ditto...Messrs. Crowder.

Best Annual...1. Messrs. Crowder, Nemophylla insignis; 2. Mrs. Elmsall, Phlox Drummondii.

Tulips.—Best Byblœmen...Mr. Thorpe, Bienfait.

Best Rose...Mr. Thorpe, Flow of the Nile.

Best Feathered Bizard...1. Mr. Fearn, Monsieur Pitt; 2. Mr. Thorpe, Trafalgar.

Best Flamed Byblœmen...Mr. Fearn, Countess Vanroy.

Best Rose...Mr. Fearn, Golden Rose.

Best Self...1. Dr. Bower; 2. Ditto, White Flag.

Best Self Breeder...1. Mr. Thorpe; 2. Dr. Bower.

Auriculas and Polyanthuses, &c.—Best Crimson Primrose...Mr. Thorpe.

Best Alpine...1. Mr. Thorpe, King of the Alps; 2. Ditto, Queen of the Alps.

Best White-edged Auricula...Mr. Thorpe, Seedling.

Best green-edged ditto...1. Mr. Thorpe, Kenyon's Ring-leader; 2. Ditto, Taylor's Victory.

Best grey-edged ditto...1. Mr. Thorpe, Stretch's Alexander; 2. Ditto, Warris's Union.

Best Dark-ground Polyanthus...1. Mr. Thorpe, Cox's Prince Regent; 2, 3, and 4. Ditto; 5. Dr. Bower; 6. Mr. Thorpe.

Best Red-ground ditto...1. Dr. Bower, Buck's George the Fourth; 2 and 3. Mr. Thorpe.

May 13. YORK. Amateur Tulips and Geraniums. Prizes awarded.

Mr. Parker and Mr. Quarton officiated as Judges, and awarded the premier prize for the best Tulip of any colour to Mr. Fawbert, for Bizard Incomparable.

Dark Feathered Bizards...1 and 2. Mr. Hepton, Surpass Catafalque; 3. Mr. Hepton, Emperor of Austria; 4. Mr. Hodgson, La Cantique; 5. Mr Duke, ditto.

Feathered Byblœmens...1. Mr. Pearson, Bienfait; 2 and 3. Mr. Hepton, ditto; 4. Mr. Fawbert, Rein de Pruss; 5. Mr. Pearson, Bienfait.

Feathered Roses...1. Mr. Hepton, Lady Carew; 2. Mr. Cowper, Do Little; 3. Mr. Steward, ditto; 4. Mr. Cowper, ditto; 5. Mr. Steward, ditto.

Flamed Bizards...1. Mr. Fawbert, Bizard Incomparable; 2. Mr. Pearson, ditto; 3. Mr. Duke, ditto; 4. Mr. Fawbert, ditto; Mr. Hepton, Sanjio.

Flamed Byblœmens...1. Mr. Cowper, Incomparable Premier Noble; 2. Mr. Hepton, Bienfait; 3. Mr. Hepton, Acapulca; Mr. Cowper, Cheval Noir; 5. Mr. Stead, Laura.

Flamed Roses...1. Mr. Stead, Triomphe Royale; 2 and 3. Mr. Cowper, ditto; 4 and 5. Mr. Stead, ditto.

Red Feathered Bizards...1. Mr. Hepton, St. Bertrand; 2. Mr. Pearson, ditto; 3. Mr. Steward, Trafalgar; 4. Mr. Pearson, ditto; 5. Mr. Steward, ditto.

Selfs...1. Mr. Stead, Roi de Min d'Or; 2. Mr. Hepton, ditto; 3. Mr. Steward, ditto; 4. Mr. Hepton, ditto; 5. Mr. Cowper, ditto.

Feathered Citrons...The entire class to Mr. Hepton, all with Louis l'Effroy.

Flamed Citrons...1 Mr. Hepton, Strong's Madeline, 2. Mr. Hepton, Duke of Bedford; 3. Mr. Hodgson, Louis l'Effroy; 4. Mr. Fawbert, Grande de Shoute; 5. Mr. Pearson, Louis l'Effroy.

Geraniums, white, blush, or pink...1. Mr. Duke, Adonis; 2. Mr. Duke, Rosinante; 3. Mr. Spink, Victoria; 4. Mr. Duke, Maid of Athens; 5. Mr. Duke, Hebe.

Coloured grounds...1, 2, 3, 4, and 5. Mr. Duke, with Dennis's Perfection, Gem, Lavinia Superba, and Diomede.

May 18. METROPOLITAN FLORISTS. Tulip Show Flowers exhibited. Prizes awarded.

Best	Rose of any kind,	Mr. Willmer, Catherine.
2d	...	Mr. Holmes, Mary Anne (Goldham).
3d	...	Mr. Willmer, Brilliant.
4th	...	Mr. Willmer, Minerva.
5th	...	Mr. Lawrence, Lady Jane (Lawrence).
Best	Bizard of any kind,	Mr. Lawrence, Polyphemus.
2d	...	Mr. Lawrence, King (Strong).
3d	...	Mr. Willmer, Melone (Willmer).
4th	...	Mr. Lawrence, Donzelli (Lawrence).
5th	...	Mr. Willmer, Junius Brutus.
Best	Byblœm. of any kind,	Mr. Willmer, Siam.
2d	...	Mr. Willmer, Desdemona.
3d	...	Mr. Glenny, Ambassador.
4th	...	Mr. Glenny, Holme's King.
5th	...	Mr. Willmer, Bijou des Amator.

Best Bizard Breeder, Mr. Glenny, Seedling.
Best Rose Breeder, Mr Lawrence, Seedling.
Best Byblœmen Breeder, Mr. Lawrence, Seedling.

May 18. HEATH. Tulip Show. Prizes awarded.

Feathered Bizards...1. Gigantium, Mr. J. Gill, jun.; 2. Trafalgar, Mr. Mark Blackburn; 3. Firebrand, Mr. J. Gill, sen.; 4. Belle Forme, Messrs. Thornes and Whittaker; 5. Leonatus Posthumous, Mr. T. Clegg; 6. Dauphin de France, Messrs. Thornes & Whittaker.

Feathered Roses...1. Ne plus ultra, Mr. T. Clegg; 2. Lewald, ditto; 3. Walworth, ditto; 4. Holderness Rose, Mr. J. Gill, sen.; 5. Do Little, Messrs. Thornes & Whittaker; 6. Compte de Virgennes, Mr. J. Gill, jun.

Feathered Byblœmens...1. Bienfait, extra, Messrs. Thornes & Whittaker; 2. Black Bagot, Mr. J. Gill, sen.; 3. Light Bagot, Mr. Samuel Hartley; 4. Captain Flash, Mr. J. Gill, sen.; 5. Violet Alexander, Mr. T. Clegg; 6. Queen of Egypt, Mr. J. Gill, jun.

Flamed Bizards...1. Unknown, Mr. T. Frobisher; 2. La Cantique, Mr. T. Clegg; 3. Garricola, Mr. J. Gill, sen.; 4. Magnifique, Mr. Mark Blackburn; 5. Leopold, Mr. J. Gill, jun.; 6. Gloria Mundi, Mr. T. Clegg.

Flamed Roses...1. Rose Clio, Mr. T. Clegg; 2. Triomphe Royale, Mr. J. Gill, sen.; 3. Grand Rose Imperial, Mr. T. Clegg; 4. Rose Quarto, Mr. William Fox; 5. Duc de Bronte, Mr. T. Frobisher; 6. Turner's Lord Hill, ditto.

Flamed Byblœmens...1. White Bagot, Mr. W. Fox; 2. Zuart Violet, Mr. T. Clegg; 3. Laura, ditto; 4. Theonia, Mr. J. Gill, jun.; 5. Hugobert, Mr. T. Clegg; 6. Incomparable, ditto.

Selfs...1. White Flag, Mr. T. Clegg; 2. Min d'Or, ditto; 3. Desdemona, Messrs. Thornes & Whittaker; 4. Sultana, Mr. Mark Blackburn; 5. Mountain of Snow, Messrs. Thornes & Whittaker; 6. Mirabella, unknown.

Breeders...1. Mr. J. Gill, jun.; 2. Mr. J. Gill, sen.; 3. Ditto.

NOTTINGHAM. First Exhibition.

TULIPS.

First Pan...Mr. Thackeray, Magnum Bonum, Abercrombie, Bagot, Queen Charlotte, Walworth, Unique.

Second Pan...Mr. Gascoigne, Royal Sovereign, Captain White, Bagot, Queen Charlotte, Triomphe Royale, Unique.

Third Pan...Mr. Harpham, Trafalgar, Captain White, Lilliard, Queen Charlotte, Lady Crewe, Unique.

Class 1.—Premier...Mr. Gascoigne, Victory; 1. Ditto, Surpass Catafalque; 2. Ditto, Magnum Bonum; 3. Ditto, Old Dutch Catafalque.

Class 2.—Premier...Mr. Gascoigne, Albion; 1. Mr. Harpham, Capt. White; 2. Mr. Gascoigne, Albion; 3. Mr. Harpham, Lord Milton.

Class 3.—Premier...Mr. Gascoigne, Bagot; 1. Ditto, Lilliard; 2. Mr. Thackeray, Imperatrix Florum; 3. Mr. Gascoigne, Bishop of York.

Class 4.—Premier...Mr. Harpham, Queen; 1. Mr. Thackeray, Sable Rex; 2. Mr. Gascoigne, ditto; 3. Mr. Thackeray, Violet Sovereign.

Class 5.—Premier...Mr. Gascoigne, Triomphe Royale; 1. Ditto, ditto; 2. Ditto, Walworth; 3. Ditto, Sherwood.

Class 6.—Premier...Mr. Gascoigne, Unique; 1. Ditto, ditto; 2. Mr. Harpham, Flambeau; Mr. Thackeray, Grand Rose Désir.

May 20. WOLVERHAMPTON. Tulip Show, at the Golden Bull Inn. Prizes awarded.

Premier Prize...Bagot Rex, Mr. Hardware.

Feathered Bizards...1. Mr. Pilsburg, unknown; 2. Mr. Smith, unknown; 3. Mr. Cartwright, Earl St. Vincent; 4. Ditto, Charles X.; 5. Ditto, Improved Lecantique.

Flamed Bizards...1. Mr. Thomas Smith, Surpass Catafalque; 2. Mr. J. S. Hillier, Dutch Catafalque; 3. Mr. T. Smith, Catafalque Impériale; 4. Ditto, Abercrombie; 5. Ditto, Bell's King.

Feathered Byblœmens...1. Mr. Hardware, Seedling; 2. Mr. Pilsburg, Washington; 3. Mr. Cartwright, unknown; 4. Mr. Hardware, unknown; 5. Ditto, ditto.

Flamed Byblœmens...1. Mr. T. Smith, Bagot Rex; 2. Ditto, Bates's Bagot; 3. Mr. Hardware, Washington; 4. Mr. Cartwright, Duchess of Wellington; 5. Mr. Hardware, Seedling.

Feathered Roses...1. Mr. Thomas Smith, Lady Crewe; 2. Mr. Pilsburg, unknown; 3. Mr. T. Smith, Hero of the Nile; 4. Ditto, Holmes's King; 5. Gay Stella.

Flamed Roses...1. Mr. Hardware, Rose Triomphe Royale; 2. Mr. Smith, Lucy; 3. Mr. Thomas Smith, Rose Vesta; 4. Mr. Cartwright, Georgius Tertius; 5. Mr. Hardware, Countess Marsden.

Self...1. Mr. Hardware, Groom's White; 2. Ditto, Min d'Or.

Double...1. Mr. Hardware, Mariage de ma Fille; 2. Ditto, unknown.

May 22. BILLINGSGATE Tulip Show. Prizes awarded.

1st Cup, John Goldham, Esq., Milton, Carnation Bizards; Rose Brilliant, Triomphe Royale, Roses; Duke of Wellington, Duchess of Sutherland, Byblœmens.

2d Cup, Dr. Saunders, Polyphemus, Optimus, Violet Quarto, Violet Rougette, Dutch Ponceau, Triomphe Royale.

Single Flowers...1st Prize, Mr. Gorpel, Violet Belleforme; 2. Mr. Goldham, Triomphe Royale; 3. Dr. Saunders, Polyphemus.

May 22. ROYAL CORNISH. Prizes awarded.

For the best Collection of Pelargoniums, consisting of 18 varieties, a silver cup, given by Mr. Rendle, jun., nurseryman, Union-road, Plymouth; three competitors, or the prize not to be awarded. For this prize there was but one competitor, therefore the cup could not be claimed; but the judges, considering the collection worthy of it, recommended that the Society's silver medal be awarded to C. W. Turner, Esq., for Garth's Perfection, Foster's Alicia, Dennis's Perfection, Roseanum, Lady Elizabeth Bulteel, Gaines's King, Miss Wylde, Vandyke, Alexandrinum, Beauty of Ware, Climax, Turner's Fair Ellen, Scottish Chief, Garth's Criterion, Gem, Foster's Jewess, Sir Robert Newman.

Best Miscellaneous Group of Stove Plants, six named species in flower...1. Euphorbia splendens, Oncidium, *sp. nov.*, Cattleya bicolor, Sinningia velutina, new Aristolochia, Epidendrum cochleatum, G. C. Fox, Esq., Grove Hill; 2. Ipomea Horsfallii, Gloxinia speciosa, Combretum purpureum, Clerodendrum paniculatum, Cereopegea stapeliæformis, Vinca rosea, J. Vivian, Esq., Pencalenick.

Best Specimen of Stove Plants...1. Orchideous maxillaria, Rev. W. J. Coope, Falmouth; 2. Euphorbia splendens, J. Vivian, Esq., Pencalenick.

Best 3 Bulbous Plants, of stove or greenhouse...Gladiolus alba, Gladiolus lutea, Crinum amabile superbum, J. Vivian, Esq., Pencalenick.

Best Collection of Succulents, in flower...Cactus Akermannii, Speciosissima, Seedling, S. Moyle, Esq., Bosvigo.

Best species of 6 named Greenhouse Plants in flower, not Geraniums...1. Verbena teucroides, Erica hybrida, Salvia patens, Alstrœmeria pelegrina, Amaryllis Philipsii, Fuchsia fulgens, G. C. Fox, Esq, Grove Hill; 2. Syphocampilus bicolor, Pimelia hispida, Eutaxia myrtifolia, Hovea purpurea, Erica linnœaria superba, Pimelia decussata, G. N. Simmons, Esq., Ridersville.

Best Collection of Geraniums, 12 named sorts, in pots...1. Spartacus, Beauty of Ware, Prima Donna, Garth's Perfection, Turner's Bloomsbury, Joan of Arc, Calypso, Vandyke, Priam's Queen, Climax, Sir H. Vivian, Lyne's Cœlum, C. W. Turner, Esq., Truro; 2. G. C. Fox, Esq., Grove Hill.

Best Specimen in pot...Garth's Perfection, G. C. Fox, Esq., Grove Hill.

Best Collection of plucked Flowers, 20 named varieties...1. C. W. Turner, Esq., Truro; 2. G. C. Fox, Esq., Grove Hill.

Best Collection of Salpiglossis...1. G. N. Simmons, Esq., Ridersville; 2. J. Vivian, Esq., Pencalenick.

Best Collection of Petunias...W. M. Tweedy, Esq., Alverton.

Best Collection of Verbenas...Drummondii, Millerii, incisa, melendris, Foxii purpurea, teucroides, hybrida, C. W. Fox, Esq, Truro.

Best Collection of Heartsease...1. Countess of Bridgewater, Hon. Mrs. Adams, Leo, Washington, Golden Sovereign, Ophix, Amanda, Duchess of Marlborough, Lilac Perfection, Lady Peel, Cecilia, Clouded Perfection, Lady Dartmouth, General Wolfe, Mulberry, Raphael, Brown's Superb Crimson, Queen, Fornom, Coronation, Venus, Nimrod, Mr. W. J. Rawlings, Hayle; 2. Mrs. W. Warren, Truro.

Best 6 Heaths, named varieties...1. Erica tricolor, ampullacea, albicans, Vestita alba, purpurea, reflexa, Sir C. Lemon, Bart., M.P., Carclew; 2. Odorea rosea, Ventricosa carnea, Cylindrica triflora, Gilleda cineraria, Kingii, Waterhouse, Mrs. Sampson, Tullimaar.

Best Cinerarias, four varieties, in pots...R. W. Fox, Esq., Falmouth.

Best named Collection of Hardy Herbaceous Plants...G. C. Fox, Esq., Grove Hill.

Best 6 Roses, of named sorts...Highclive Seedling, Fox's Caroline, Indica carnescens, Bengal Mousling, Auricula spec., Lady Molesworth, R. W. Fox, Esq., Falmouth.

Best 6 named varieties of Calceolarias, in pots...1. Earl of Dalhousie, King of Otaheite, Gem, Rubra aurea, Picta perfecta, Shankliana, J. Vivian, Esq., Pencalenick; 2. Majoriana Seedling, Pizarro, Cariosissimus, Mirabilis, Rugosa picta, Coccinea, G. C. Fox, Esq., Grove Hill.

Extra.—Six Geraniums, Seedlings...Prince Albert, Coope's Champion, Coope's Perfection, Matilda, Polacre, Falmouth Surprise, Rev. W. J. Coope, Falmouth.

May 25. WAKEFIELD Tulip Show. Prizes awarded.

Feathered Bizards...1. Duc de Savoy, Mr. Isaac Parker; 2. Perfitt's Yellow, Mr. Mark Blackburn; 3. La Cantique, Mr. William Fox; 4. Gigantum, Mr. Mark Blackburn; 5. Archduke, Mr. John Gill, sen.; 6. Goud Buerres, Messrs. Thornes & Whittaker.

Feathered Byblœmens...1. Light Bagot, Mr. Isaac Parker; 2. Washington, Messrs. Thornes & Whittaker; 3. Reine d'Egypte, Mr. Isaac Parker; 4. Bienfait extra, Messrs. Thornes & Whittaker; 5. Maitre partout, ditto; 6. Neat and Clean, Mr. Charles Dews.

Feathered Roses...1. Triomphe Royale, Messrs. Thornes & Whittaker; 2. La Duncan, ditto; 3. Duc de Bronte, Mr. Mark Blackburn; 4. Do Little, Mr. William Fox; 5. Schofield Rose, Mr. John Gill; 6. Lord Hill, Messrs. Thornes & Whittaker.

Flamed Bizards...1. Surpass la Cantique, Messrs. Thornes & Whittaker; 2. Goud Buerres, ditto; 3. Sir Sydney Smith, Mr. Mark Blackburn; 4. La Cantique, Mr. Joseph Steel; 5. Garricola, Mr. John Gill; 6. Magnifique, Mr. Mark Blackburn.

Flamed Byblœmens...1. Light Bagot. Mr. Thomas Parker; 2. Bienfait, Messrs. Thornes & Whittaker; 3. Francis Primus, Mr. Mark Blackburn; 4. Violet le'Bing, ditto; 5. Wood's King, Mr. Isaac Parker; 6. Dunstan, Mr. Mark Blackburn

Flamed Roses...1. Marilla d'Europe, Messrs. Thornes & Whittaker; 2. Rose Quarto, Mr. Mark Blackburn; 3. Duc de Bronte, ditto; 4. Lord Hill, ditto; 5. Unknown, Mr. Isaac Parker; 6. Earl brilliant, Mr. John Gill.

Selfs...1. Min d'Or, Mr. Joseph Steel; 2. Golden Hero, Messrs. Thornes & Whittaker; 3. Desdemona, ditto; 4. Queen of Sultana, Mr. Mark Blackburn; 5. Mountain of Snow, ditto; 6. White Flag, Mr. Joseph Steel.

Breeders...1. Seedling, Mr. Mark Blackburn; 2. Woad's King, ditto; 3. Seedling, Mr. John Gill; 4. Walworth, ditto; 5. Seedling, ditto; 6. Seedling, Mr. Mark Blackburn.

Pansies, Seedlings...1. Mr. John Parker; 2. Ditto.

SHEFFIELD Tulip Show. Prizes awarded.

Class 1.—Dark Feathered Bizards...1. Mr. Yowet, La Cantique; 2. Ditto, Dutch Catafalque; 3. Mr. Wilson, Duc de Savoy; 4. Mr. Yowet, Turner's Black-edged; 5. Mr. Birtles,

Benet's Seedling, No. 4; 6. Mr. Wild, Arcade; 7. Mr. Yowet, Holmes's Pitt; 8. Mr. Martin, Wolstenholm Bizard; 9. Mr. Yoll, Surpass Catafalque; 10. Mr. Wilson, Charbonnoir.

Class 2.—Red-edged Bizards...1. Mr. Yoil, Trafalgar; 3. Mr. Birtles, Lord Brougham; 3. Ditto, Goud Buerres; 4. Mr. Yoll, Optimus; 5. Mr. Birtles, Daphne; 6. Ditto, Firebrand; 7. Mr. Wild, Platoff; 8. Mr. Martin, Yellow Do Little; 9. Mr. Ouldham, Perfecta; 10. Mr. Wilson, Albion.

Class 3.—Edged Byblœmens...1. Mr. Birtles, White Maitre Partout; 2. Ditto, Turner's No. 18; 3. Mr. Yoil, Black Bouquet; 4. Mr. Birley, Seedling (Prince Albert); 5. Ditto, Light Baguet; 6 Mr. Wilson, Bienfait; 7. Mr. Birley, Incomparable; 8. Mr. Birtles, Capt. Flash; 9. Mr. Musscroft, Alexandre du Roi; 10. Ditto, Variabilum.

Class 4.—Rose Edged...1. Mr. Musscroft, Hero of the Nile; 2. Mr. Martin, Glory of Walworth; 3. Mr. Yoil, Duc de Bronte; 4. Mr. Martin, Do Little; 5. Mr. Yoll, Halden's Rose; 6. Mr. Birtles, Rose Unique; 7. Mr. Wilson, Lord Hill; 8. Mr. Martin, Rose Vesta; 9. Mr. Musscroft, Compte de Vergennes; 10. Ditto, Lady Crewe.

Class 5.—Flamed Byblœmens...1. Mr. Birtles, Louis the Sixteenth; 2. Mr. Wild, Wade's King; 3. Mr. Birtles, Turner's No. 18; 4. Mr. Birley, Yaux; 5. Mr. Wild, Roi de Violets; 6. Mr. Yoil, Violet Waller; 7. Mr. Birley, Queen Charlotte; 8. Mr. Ouldham, Alexander Magnus; 9. Mr. Wild, Beauty Parfaite; 10. Mr. Baston, Laura.

Class 6.—Flamed Bizards, dark...1. Mr. Yowet, Surpass la Cantique; 2. Mr. Birley, Lustre; 3. Mr. Baston, Lord Stanley; 4. Mr. Wild, Albion; 5. Mr. Birtles, Grandeur Superb; 6. Mr. Baston, Turner's Bing; 7. Mr. Birtles, Liberty; 8. Mr. Musscroft, Charbonnoir; 9. Mr. Birtles, Phœnix; 10. Ditto, Surpass Superb.

Class 7.—Red-edged Bizard Flame...1. Mr. Wild, Trafalgar; 2. Mr. Boston, Dauphin; 3. Mr. Birtles, Goud Buerres; 4. Ditto, Goud Munt; 5. Mr. Youet, Yellow Do Little; 6. Mr. Baston, Ophir.

Class 8.—Rose Flamed...1. Mr. Birley, Do Little; 2. Mr. Baston, Duc de Bronte; 3. Mr. Birtles, Holiden Rose; 4. Mr. Baston, Compte de Vergennes; 5. Mr. Birtles, Selina; 6. Mr. Yowet, Rose Unique; 7. Mr. Wilson, Rose Vesta; 8. Mr. Yoil, Lord Hill; 9. Mr. Baston, Roi des Cerise; 10. Mr. Martin, Sherwood.

May 27. Royal Berks, at Wallingford. Prizes awarded.

Tulips, collection of 100, the Royal Medal...W. S. Clarke, Esq. The following were a few of the varieties noticed in the collection:—

Bizards...Strong's King, Polyphemus, Shakspeare, Neptune, Fabius, Ostade.

Byblœmens...Thalia, Adelaide, Salvator Rosa, La Joie de Lawrence, Proteus, Lawrence's Friend, Superbe en Noir.

Roses...Lawrence's Princess Augusta, Rose Lac, Beteral's Brulante, Lavinia, Dutch Ponceau, Madame Vestris, &c.

Tulips, stand of 12 (for Nurserymen)...Messrs. Tyso & Son, Madame Catalani, Sir Thos. Hammond, Acapulca, Triomphe Royale, Carlo Dolce, Madame Vestris, Rubens, Ulysses, Maid of Kent, Polyphemus, Platoff, Rainbow.

Ditto, ditto (for Amateurs)...1. Mr. West, Ambassador, Captain Lampson, Platoff, Globe, Holmes's King, Reine de Sheba, Claudiana, Captain White, Catharine, Polyphemus, Strong's King, Triomphe Royale; 2. E. Wells, Esq., Slade End, Platoff, Diana, Hebe, Captain White, Arbre de Diana, Duchess of Wellington, Reine d'Egypte, Triomphe Royale, Polyphemus, Earl of Chatham, Claudiana, Rubens; 3. Mr. Costal, Washington, Holmes's King, Triomphe Royale, Platoff, Captain White, Siam, Diana, Bagguetts, Cerise Blanche, Reine d'Egypte, Ambassador.

Tulips in Classes, Feathered Bizard...1. Mr. West, Gloria Mundi; 2. W. S. Clarke, Esq., Shakspeare; 3. Ditto, Strong's King.

Ditto, Flamed Bizard...W. S. Clarke, Esq., Polyphemus.

Ditto. Feathered Byblœmens...1. Mr. West, Ambassador; 2. W. S. Clarke, Esq., Lawrence's Friend.

Ditto, Flamed Byblœmens...W. S. Clarke, Esq., Thalia.

Ditto, Feathered Rose...W. S. Clarke, Esq., Cerise Blanche.

Ditto, Flamed Rose...W. S. Clarke, Esq., Dutch Ponceau.

Pansies, collection of 100...1. Mr. J. S. Cook; 2. Mr. J. Batten; 3. Mr. Undershell; 4. Mr. W. S. Clarke.

Ditto, stand of 24...Mr. J. S. Cook; 2. Mr. Undershell; 3. Mr. J. Batten.

Ditto, Seedlings, shown singly...1. Mr. J. S. Cook; 2. Mr. West.

Geraniums, 6 varieties (for Nurserymen)...1 Messrs. Tyso & Son; 2. Mr. Lynn.

Ditto (for Amateurs)...W. S. Blackstone, Esq.

Heaths, 6 varieties...W. S. Clarke, Esq.

Greenhouse Plants, 6 varieties...1. E. Wells, Esq.; 2. W. S. Clarke, Esq.

Ditto, collection of (for Nurserymen)...Messrs. Sutton.

Ditto, ditto (for Amateurs)...1. E. Wells, Esq.; 2. W. S. Clarke, Esq.

Extra prizes were also awarded for collections of Cut Flowers, Calceolarias, Geraniums, Verbenas, &c.

May 29. WINGHAM. Prizes awarded.

Best 3 Geraniums...1. J. Godfrey, Esq., Chef d'Œuvre, Garth's Perfection, Lady Blanche; 2. Ditto, Fasteri Roses, Rosa, Pixey Queen.
Best 1 Geranium...Denne Denne, Esq., Alicia.
Best 3 Herbaceous Calceolarias...Mrs. Gregory, 3 Seedlings.
Best 3 Shrubby Calceolarias...J. Godfrey, Esq., Gem, Criterion, Rembrandt.
Best 3 Mimuli...Mr. Sankey, Wheeleri, Mastersii, Guttatus.
Best 3 Annuals...Denne Denne, Esq., Collinsia bicolor, Phlox Drummondi, Schizanthus Retusus.
Best 3 Cacti...J. Godfrey, Esq., Ackermanni minor, Mastersii, Speciosissimus.
Best Cactus...Mr. Sankey, Lateritius.
Best Bulb in flower...Denne Denne, Esq., Gladiolus Colvilli.
Best Fuchsia...1. J. Godfrey, Esq., Fulgens; 2. Mr. Sankey, Globosa.
Best Rose...Denne Denne, Esq., Sweet-scented China.
Best Indian Azalea...Denne Denne, Esq., Alba.
Best 3 Greenhouse Plants...1. J Godfrey, Esq , Pimelia decussata, Epacris heteronymia, Boronia serrulata; 2. J. P. Plumptre, Esq., M P., Erithryna Crista Galli, Hoya carnosa, Adenandra uniflora.
Best 12 Tulips...1. Mr. T. Gibbs, Hutton's Optimus, Violet Antonia, Surpass Catafalque, Sir Sidney Smith, Pickwick, Brulanto Eclaule, Roi de Siam. Violet superbe, Triomphe Royale, Captain White, Cleopatra, Pizarro; 2. Mr. Johnson, Blandinack, Eva, Unknown, Incomparable Vertport, Rose fue, Bagot, Sangbœuf, Triomphe Royale, William Pitt, Rose Pearl Brilliant, Sir Sidney Smith, Wood Pigeon.
Ranunculuses not named.
Best 12 Double Anemones...Mr. Dadds.
Best 3 White Stocks...Mr. T. Gibbs.
Best 3 Red Stocks...Mrs. Hudson.
Best 12 Heartseases...1. The Rev. J. Dix, Conqueror of Europe, Duke of Wellington, Beauty of Ealing, Grand Duke of Russia, Stella, Masterpiece, Oliver Twist, Sanguineum Grandice, Victoria, Beauty of Enfield, Don John; 2. Mr. Jullion, Magnet Bellona, Majestic Anne Maria, Mazeppa, Edina, Tory, Jour Magnet, Lovegrove's Coronation, Doctor Brown, Superb purple, Duke of Wellington.
Best 6 Geraniums, cut...J. Godfrey, Esq., Chef d'Œuvre, Alicia, Duke of Devonshire, Hericartianum, Dennis's Perfection, Miller's Splendidissimum.
Best 6 Irises, cut...Mr. Keeler, Siberica, Gramineum, Germanica, Florentina, Pseudo-Acones, and 1 other.
Best Bouquet of Forced Flowers...J. P. Plumptre, Esq., M.P.
Best Bouquet of Hardy Flowers...J. P. Plumptre, Esq., M.P.
Best Floral Device...1. Mrs. Sankey, a Vase; 2. Mr. J. M. Rigden, a Wheel.

May 29. BURNLEY. Prizes awarded.

TULIPS.

For the best Tulip of any colour or class...Premier prize, Mr. Grimshaw, Barrowford, Walworth.
The best pan of Tulips, of 6 colours, or classes...Mr. Grimshaw, Crown Prince, Dutch Catafalque, Comparable, Bien Fait, Violet à fond Noir, Lady Crewe, La Purité.
Class 1....Feathered Bizard...1. Crown Prince, B. Moore; 2. Wellington, ditto; 3. Crown Prince, J. Grimshaw; 4. Trafalgar, L. Whitham; 5. Unknown. J. Whitham; 6. Conqueror of Europe, L. Whitham.
Class 2....Flamed Bizard...1. Lustre, J. Whitham; 2. Unknown, ditto; 3. Charles X., J. Grimshaw; 4. Unknown, B. Moore; 5. Ditto, J. Whitham; 6. Ditto, ditto.
Class 3....Feathered Byblœmen...1. Bagot, J. Whitham; 2. Black ditto, B. Moore; 3. Surpass Toot, L. Whitham; 4. Fair and Nice, ditto; 5. Ambassador of Holland, J. Grimshaw; 6. Washington, J. Whitham.
Class 4....Flamed Byblœmen...1. Surpassant, J. Grimshaw; 2. Washington, ditto; 3. Vulcan, J. Moorhouse; 4. Unknown, J. Whitham; 5. Violet Wallens, J. Grimshaw; 6. Sable Rex, ditto.
Class 5....Feathered Rose...1. La Tenderesse, L. Whitham; 2. Do Little, B. Moore; 3. Triumphant Royal, J. Moorhouse; 4. Holding's Rose, J. Whitham; 5. Incog. ditto; 6. Lady Crewe, J. Grimshaw.
Class 6....Flamed Rose...1. Rose Unique, Mr. Grimshaw; 2. La Purité, ditto; 3. Rose Vesta, L. Whitham; 4. Unknown, B. Moore; 5. Surety, L Whitham; 6. Unknown, B. Moore.
Breeders...1. Charbonnier; 2. Fabias; 3. Rose; J. Grimshaw.
Doubles...1 and 2. L. Whitham.
Fruit and Vegetables were indifferent, and not named.

UTTOXETER. Floral Society Prizes awarded:

Best pan of 6 dissimilar blooms...1. Sultana, Page's George the Fourth, Black Bouquet, Strong's Black Prince, Duc de Bronte, and Triomphe Royale, Mr. Garle; 2. Trafalgar, Surpass la Cantique, Lillard La Tamarare, Queen Boadicea, and Lady Crewe, Mr. Ashley.
Feathered Bizards ... 1. Surpass Catafalque, Mr. Ashley; 2. Trafalgar, Mr. Rogers; 3.

Ditto, Mr. Ashley; 4. School's Delight, Mr. Garle; 5. Sultana, Mr. Rogers; 6. Trafalgar, Ditto.

Flamed Bizards...1. Earl Stanhope, Mr. Ashley; 2. Phœnix, Mr. Garle; 3. Surpass la Cantique, Ditto; 4. Captain White; 5 and 6. Prince William, Mr. Ashley.

Feathered Byblœmens...1. Black Bouquet, Mr. Garle; 2. Violet Grand Turk, Ditto; 3. May Queen, Ditto; 4. Moreu, Mr. Rogers; 5. Black Bouquet, Mr. Garle; 6. Lord Exmouth, Ditto.

Flamed Byblœmens...1. Sable Rex, Mr. Clarke; 2. Valean, Mr. Garle; 3. La Tamarare, Mr. Ashley; 4. Gadsby's Magnificent, Mr. Clarke; 5. Reine d'Egypte, Mr. Rogers; 6. Dawson's Seedling, Mr. Garle.

Feathered Roses...1. Duc de Bronte, Mr. Garle; 2. Princess de Austuria, Ditto; 3. Duc de Bronte, Mr. Ashley; 4. Do Little, Ditto; 5. Unknown, Mr. Rogers; 6. Lady Crewe, Mr. Garle.

Flamed Roses...1. Josephine, Mr. Clarke; 2. Rose Unique, Mr. Garle; 3. Rose Ruby, Ditto; 4. Triomphe Royale, Ditto; 5. Lord Hill, Ditto; 6. Vesta, Ditto.

Selfs...1, 2, 3, 4, 5, and 6. Breeder, Mr. Garle.

June 2. CHELTENHAM. At the Montpelier Rotunda. Exhibitions and Prizes.

AMATEURS.

Tulips, stand of 12 Blooms...Triomphe Royale, Platoff, Bienfait Incomparable, Ambassador, Mentor, Lewald, Polyphemus, Claudiana, Princess Elizabeth, Holmes's King, Benjamin, Princess Charlotte, Superbissima, Catalani, Cerise belle forma, Mrs. Eysten.

Seven Blooms, not named...Mrs. Eysten.

Pansies, best collection...1. Mrs. Gray; 2. Mrs. Dowdeswell.

Stove, or Greenhouse Plant...1. Cactus speciosus, Mrs. Dowdeswell; 2. Statice arborea, Mrs. Wray.

Ericas...1. Erica hybrida, Mrs. Wray; 2. Linnea superba, Mrs. Dowdeswell.

Geraniums...1. Fosterii rosea, P. Thompson, Esq.; 2. Diomede, Mrs. Dowdeswell; 3. Ditto, six different varieties, Splendissima, Adonis, Belladoni, Fosterii rosea, Vivid, Gem, P. Thompson, Esq.

Best collection of 6 Plants...Azalea indica alba, Azalea grandiflora, Burchellia capensis, Boronia serrulata, Springelia incarnata, Rhododendron hybridum, Mrs. Wray.

Best Ornamental Basket of Plants...Mrs. Wray.

Asparagus...1. Miss Gregoe Colmore; 2. P. Thompson, Esq.

Cucumbers...Sort not mentioned.

Basket of Sallad...1. P. Thompson, Esq.; 2. Mrs. Dowdeswell.

Grapes...Sort not mentioned.

NURSERYMEN AND MARKET GARDENERS.

Tulips, stand of 12 Blooms...1. Emperor of Russia, Violet Antonia, Sanjio, Rosa Blanca, Marc Antony, Abercrombie, Lady Elizabeth, Holmes's King, Triomphe Royale, Alcon, Cato, Rio de Borneo, Mr. Gregory; 2. Mirabella, Washington, Diana, Triomphe Royale, Bacchus, Agate, Scipio, Darius, Dolittle, Georgius Tertius, Bagot, Pretiosa, Mr. Pike.

Double Anemones, stand of 7 Blooms...1. Gloria Mundi, Ronse Blewatu, Mon Bijoux, Blanche Superb, Talestris L'Amoreux, Regina Ruborum, Mr. Pipe; 2. Rouge Bien, Alcon, Vanspeck, Majesture, Bouquet Royal, L'Admirable, La plus Belle, Mr. Gregory.

Best Collection of 6 Plants...1. Statice arborea, Diplacus puniceus, Abutilon striata, Combretum purpureum, Azalea Danielsiana, Mr. Hodges; 2. Diplacus puniceus, Combretum purpureum, Clematis Sieboldii, Epacris pulchella, Epacris grandiflora, Erica ventricosa superba, Mr. Pipe.

Best Collection of 12 Geraniums...1. Eliza Superb, Jewess, Sylph, Climax, Victory, Dennis's Perfection, Coronation, Hodges's Emperor, Priory Queen, Grand Duke, Joan of Arc, King, Mr. Hodges; 2. Coronation, Conservative, Florence, Joan of Arc, Jewess, Prima Donna, Climax, Liddonia, Diana Vernon, Louis Quatorze, Dennis's Perfection, William the Conqueror, Mr. Pipe; 3. Climax, Alucia, Jewess, Lounde's Perfection, Dennis's Perfection, Louis Quatorze, Ion, Joan of Arc, Alexandrina, Oliver Twist, Louis Seize, Fosterii Rosea, Georgiana Maria, Mr. Hurlston.

Best Ornamental Basket of Plants...Mr. Hodges.

Best Specimen Plant...Fuchsia fulgens, Mr. Arnott.

Potatoes, forced...1. Ash-leaf Kidneys, Mr. Dale; 2. Ash-leaf Kidneys, Mr. Utterson.

Asparagus...1. Mr. Utterson; 2. Mr. Hurlston.

SWEEPSTAKE PRIZES, OPEN TO ALL COMPETITORS.

Best stand of 12 Tulips...Rose Galatea, Imperatrice de Maroc, Emperor of Russia, Rosa Blanca, Commandant, Claudiana, Incomparable Degrath, Triomphe Royale, Desdemona byb., Sanzio, L'Admirable, Fabius, Mr. Gregory.

Best stand of 12 Geraniums...Fosterii Rosea, Joan of Arc, Garth's Perfection, Alexandrina, Splendissima, Niobe Jewess, Oliver Twist, Colossus, Vandyke, Alacea, Adonis, P. Thompson, Esq.

Some extra Prizes were awarded, but the productions not named.

June 2. WOLVERHAMPTON. Second Meeting. Prizes awarded.

Tulips, best pan of 8 dissimilar Blooms...Mr. T. Smith.

Premier prize...Earl St. Vincent, Surpass Catafalque, Rose Triomphe Royale, Rose Bagot, Hero of the Nile, Mitchell's Queen, Alexander Magnus, Trafalgar.

Flamed Biblœmens...1. Mitchell's Queen, Mr. Thomas Smith; 2. Not named; 3. Alexander Magnus, Mr. Thomas Smith.

Feathered Roses...1. Rose Triomphe Royale, Mr. Thomas Smith; 2. Hero of the Nile, ditto; 3. Not named.

Self...Ride Min d'Or, Mr. Bullock.

BEESTON. Prizes awarded.

TULIPS.

The first and Premier prize was awarded to Mr. Wilmott, for the following flowers, viz. ...Grand Duke, Captain White, Lillard, Queen Charlotte, Lady Crewe, and Lady Wilmott.

The second to Mr. Wheatly, for Platoff, Pizarro, Lillard, Violet Waller, Queen Boadicea, and Vesta.

Class 1....Premier Prize, Trafalgar, Mr. Greasley.

Feathered Bizards...1. Pass Perfecta Davey, Mr. Wilmott; 2. Surpass Catafalque, ditto; 3. Duc de Savoy, Mr. Greasley; 4. Trafalgar, Mr. Choulerton; 5. Platoff, Mr. Wilmott; 6. Grandeur Touhant, ditto; 7. Charles the Tenth, ditto; 8. Duke of Wellington, ditto; 9. Trafalgar, Mr. Choulerton; 10. Sultan, Mr. Greasley.

Class 2....Premier prize, Leonatus Posthumous, Mr. Wilmott.

Flamed Bizards...1. Captain White, Mr. Wilmott; 2. Lee's Grandissima, Mr. Spray; 3. Bizar Surpassant, ditto; 4. Plutarch, Mr. Choulerton; 5. Columbus, Mr. Wheatly; 6. Cato, Mr. Spray; 7. Bizard, ditto; 8. Lord Nelson, Mr. Choulerton; 9. Dutch Catafalque, Mr. Spray; 10. Superb, ditto.

Class 3...Premier prize, Black Baquet, Mr. Choulerton.

Feathered Byblœmens...1. Gedlings, Mr. Wilmott; 2. Robottom's Incomparable, ditto; 3. Bishop of York, Mr. Wheatly; 4. Nectroprotule, Mr. Greasley; 5. Ambassadeur de Holland, Mr. Wheatly; 6. Washington, ditto; 7. Corunna, Mr. Greasley; 8. Unknown, ditto; 9. Gay Stella, Mr. Spray; 10. Black Baquet, Mr. Wheatly.

Class 4....Premier prize, Sable Rex, Mr. Wilmott.

Flamed Byblœmens...1. Archduke Charles, Mr. Wheatly; 2. Gadsby's Magnificent, ditto; 3. Flamed Corunna, Mr. Wilmott; 4. Queen Adelaide, ditto; 5. Violet Alexander, Mr. Wheatly; 6. Alexander, ditto; 7. Queen of Wirtemburg, ditto; 8. Violet Waller, Mr. Greasley; 9. La Bien Amie, Mr. Wilmott; 10. Rose Ryant, ditto.

Class 5...Premier prize, Lady Middleton, Mr. Wilmott.

Feathered Roses...1. Triumphant Royal, Mr. Wilmott; 2. Gay Stella, Mr. Choulerton; 3. Sherwood Rose, Mr. Wheatly; 4. Lady Crewe, Mr. Wilmott; 5. Lady Wilmott, Mr. Wheatly; 6. Dolittle, Mr. Greasley; 7. Rose Pompone, ditto; 8. Walworth, Mr. Wheatly; 9. Miss Hadden, ditto; 10. Queen Boadicea, Mr. Spray.

Class 6....Premier prize, Lavandikken, Mr. Wilmott

Flamed Roses....1. Rose unique, Mr. Wilmott; 2 Turner's Lord Hill, Mr. Greasley; 3. Flambeau de la Duchesse, Mr. Wilmott; 4. Rose Vesta, ditto; 5. Lord Wellington, Mr. Spray; 6. Beviour Rose, Mr. Greasley; 7. Lavandikken, Mr. Choulerton; 8. Pearson's Lord Hill, Mr. Greasley; 9. Triumphant Royal, Mr. Spray; 10. Vesta, Mr. Wheatly.

Class 7....Premier prize, Oilette, Mr. Wilmott.

Breeders...1. Seedling, Mr. Wilmott; 2. Boadicea, ditto; 3. Sherwood, ditto; 4. Bagot, Mr. Choulerton; 5. Seedling, ditto; 6. Victory, Mr. Wilmott; 7. Seedling, ditto; 8. Walworth, Mr. Greasley; 9. Seedling, Mr. Wilmott; 10. Seedling, Mr. Choulerton.

Selfs...Premier prize, Min d'Or, Mr. Choulerton; 1. White Flag, Mr. Greasley; 2. Min d'Or, Mr. Choulerton.

A beautiful variety of Greenhouse and Geranium plants, from the conservatories of T. B. Charlton, Esq., decorated the room, amongst which, for beauty and fragrance, we noticed the following, viz.:...Cactus speciosissimus, Hoya carnosa, Fuchsia fulgens, Rose odorata, Gladiolus blandus, Calceolaria rugosa, Geranium Willoughbyanea, Geranium Diomede, Geranium Ledonia, Geranium perfection, Geranium speculum mundi, Geranium Alexandrianum.

June 10. DUNDEE. Second Exhibition. Prizes awarded.

Best 6 Violets...1. Mr. D. Wallace, gardener to Charles Chalmers, Esq., Magdalen-yard, Masterpiece, Ringleader, Venosa, Duchess of Kent, Belzoni, Queen Victoria; 2. David Martin, Esq., Queen Victoria, Guido, Bellona, Lady Peel, Shakspeare, Ringleader.

Best 12 Violets...1. D. Martin, Esq., Lady Peel, Defiance, The Doctor, Edina, Amato, Eclipse, Don John (Widnall's), Queen Victoria, Cassius, Countess of Camperdown, one unknown, Sir James Graham....2. David Miln, Esq., Brae Cottage, Masterpiece, Rob Roy, Blackeyed Susan, John Bull, Richardson's Adelaide, Northern Lion, Phœbus, Handyside's Conqueror, Lutea purpurea, Hornsey Hero, Lady Peel, and a Seedling.

Best 3 Seedling Violets...1. Charles Guthrie, Esq. 2. Mr. S. Thompson, Broughty Ferry.

Best 6 Petunias...D. Miln, Esq., Lord Brougham, Victoria, Duke of Wellington, Empress, Lady Durham, and a Seedling.

Best specimen Bulb...1. Charles Clark, Esq., Westfield Cottage, Oxalis floribundus; 2. David Miln, Esq., Oxalis Dreppii.

Best variety of Double Stocks...Mr. P. Brown, gardener to John Sanderson, Esq., Magdalen-yard.

Best 4 Calceolarias...1. Alexander Easson, Esq., Sharman's Sir John Thorold, Augusta, Cestriensis, King; 2. Charles Clark, Esq., Sharman's Sir John Thorold, Picta coccinea, King, Dicksonia.

Best 8 Calceolarias...1. Charles Clark, Esq., Sharman's Ne Plus Ultra, Sharman's Sir John Thorold, Sharman's Magnum Bonum, Dicksonia, Picta coccinea, Sharman's Clio, Miss Gladston, and a Seedling; 2. Alexander Easson, Esq., Dicksonia, Cestriensis, Lutea coccinea, Lord J. Russell, Sharman's Ne plus Ultra, and three Seedlings.

Best Seedling Calceolaria...1. David Miln, Esq; 2. Charles Clark, Esq.

Best collection of Greenhouse Blooms (cut flowers)...1. Charles Clark, Esq.; 2. David Miln, Esq.

Best 6 Greenhouse Plants...1. Alexander Easson, Esq., Fabiana imbricata, Kennedia glabrata, Bossea Linneoides, Pimelia decussata, Erica ventricosa stellata, Chorizema Dicksonia; 2. Charles Clark, Esq., Pimelia decussata, Petunia Victoria, Verbena Clarkiana, Verbena Hylandsii, Cineraria King, Senecio elegans rubra.

Best pair of Heaths...Charles Clark, Esq., Erica hydrida, Erica Cenuthoides.

Pelargoniums...Not named.

Best Greenhouse Climber...1. Kennedia coccinea; 2. Charles Clark, Esq., Tropœolum pentaphyllum.

Best specimen Plant for beauty...1. Alexander Easson, Esq., Erica vestita fulgida; 2. Charles Clark, Esq., Sharman's dark-blotched Calceolaria.

Best specimen Plant for rarity...1. Alexander Easson, Esq., Clematis azurea grandiflora; 2. Not named.

Best 8 Herbaceous Blooms...1. Sir John Ogilvy, Bart., of Baldoven, Anthericum liliastrum, Anthericum lilliage, Thalictrum equaligafolia, Dodecatheon media, Lupinus rivularis, Valeriana hortensis, Amaryllis lutea, Papaveratia rubra; 2. David Miln, Esq., Lupinus grandiflora, Lycluris fulgens, Mule Pink, Prumila farinosa, Gnaplialum divasie, Saxifraga rotundifolia, Peony, Metricaria grandiflora.

Best Bouquet, M. Jamison's Prize...Mr. David Wallace, gardener to Charles Chambers, Esq.

Best Bouquet, the Society's Prize...1. Mr. Peter Brown; 2. Charles Guthrie, Esq.

June 13. HORTICULTURAL SOCIETY. Second Exhibition. Prizes awarded.

LARGE COLLECTION OF STOVE AND GREENHOUSE PLANTS.

Mr. Butcher, gardener to — Lawrence, Esq., and Mr. Green, gardener to Sir E. Antrobus, were both adjudged worthy of first prizes, Gold Knightian medals.

2d Prize, Gold Banksian, Mr. Redding, gardener to Mrs. Marryatt.

SMALL COLLECTION OF DITTO.

Mr. Green, and Mr. Bruce, gardener to Boyd Millar, Esq., were both adjudged worthy of first prizes, being the Gold Banksian medal.

James Barnes, gardener to Sir H. Jenner, Mr. Faulkner, gardener to H. Palmer, Esq., and Wm. Barnes, gardener to — Norman, Esq., were all three adjudged worthy of second prizes, viz. large Silver medals.

Mr. Pratt, gardener to W. Harrison, Esq., and Mr. Watson, gardener to — Wells, Esq., were both adjudged worthy of third prizes, viz., Silver Knightian medals.

Cacti, melon shaped...Mr. Palmer, of Shacklewell.

Heaths, collection of 30...1. Mr. Barnes, gardener to — Norman, Esq; 2. Mr. Butcher, gardener to — Lawrence, Esq.

Ditto, Nurserymen...1. Mr. Pamplin, Hornsey-road; 2. Mr. Jackson, of Kingston.

Ditto, 6 Species...1. R. May, gardener to E. Goodheart, Esq.; equal second prizes, J. Allnutt, Esq., of Clapham, F.H.S., Mr. Pratt, gardener to W. Harrison, Esq.

Geraniums...1. Mr. Cook, Chiswick; 2. Mr. Butcher.

Ditto, Nurserymen...1. Mr. Catleugh, Chelsea. 2. Mr. Gaines, Battersea.

Herbaceous Calceolarias...1. Mr. Barnes, gardener to — Norman, Esq.; 2. Mr. Green, gardener to Sir E. Antrobus.

Ditto, Nurserymen...Mr. Catleugh.

Shrubby Calceolaria...Mr. Green.

Ditto, Nurserymen...Mr. Gaines.

Seedling Geraniums...1. — Foster, Esq., Clewer; 2. Rev. Mr. Garth; 3. Mr. Pontey, of Plymouth.

Tall Cacti...Mr. Faulkner.

Rhododendron...1. Prize withheld; 2. Mr. Smith, Norbiton.

Roses...1. Mr. Milne, gardener to — Chauncey, Esq. F.H.S.; 2. G. R. Alston, Esq.; 3. Mr. Leslie, gardener to — Fleming, Esq. F. H. S.

Roses (Nurserymen)...1. Messrs Lane and Sons, Berkhampstead; 2. Messrs. Wood and Son, Maresfield. Mr. Cobbet, Woking, Mr. Hooker, Brenchley, and Mr. Paul, Cheshunt; 3. Mr. Wood; 4. Mr. Dennis, Chelsea.

Orchideous Plants in Collection...1. Amateurs, Mr. Mylam, gardener to — Rucker, Esq.; 2. Mr. Clarke, gardener to V. Morris, Esq. F.H.S.

Nurserymen...1. Messrs. Rollisson.

Orchideous Plants, three species...1. Mr. Mylam; 2. Mr. Dunsford, gardener to Baron Dimsdale; 3. Mr. Barnes, gardener to — Norman, Esq.

Orchideous, single species...1. Lady Rolle; 2. Mr. Dunsford; 3. Mr. Bruce.

Plants not in flower...1. Mr. Barnes, for Grevillia Robusta; 2. Mr. Dunsford, for Doryanthus excelsa.

Plants, new or old, in flower...1. Mr. Butcher, for Stephantous follicularis; 2. Mr. Cock, for a specimen of large growth in the Pelargonium; 3. Mr. R. May, for Erica globosa; Mr. Clarke, gardener to Sir C. Lemon, F.H.S., for a Hydrangea; Mr. Mountjoy, for a plant of Stylidium fasciculum; Mr. Smith, Norbiton, for a plant of Azalea Danielsiana; Mr. Barnes, gardener to — Norman, Esq., for Lechenaultia formosa; Mr. Scott, gardener to C. Boxley, Esq., for Alstrœmeria Ehromboltia.

Miscellaneous...Mr. Barnes, gardener to Sir H. Jenner, for Cockscombs.

June 17. CAMBRIDGE. United Ranunculus Show. At the Hoop Hotel.

Ranunculuses...Mr. R. Headly, P. P. Seedling...Headly's King James.

White Ground, Spotted...1. Seedling, Headly's Maid Marian; 2. Retaliator, ditto; 3. Maid Marian, ditto; 4. Seedling (Headly's Angelina), ditto; 5. Seedling (Maid Marian), ditto; 6. Seedling (Angelina), ditto.

Dark Purple...1. Superbus, Mr. Crisp; Œil Noir, ditto; 3. Charbonnier, ditto; 4. Kempenfeldt, ditto; 5. Superbus, ditto; 6 Socrates, ditto.

Yellow Ground, Spotted...1. Agamemnon, Mr. Ready; 2. Julius, Mr. Ready; 3. Seedling (Headly's Jason), Mr. Headly; 4. Nestor, Mr. Crisp; 5. Andromache, Mr. Crisp; 6. L'Arbrisseau, Mr. Catling.

Rose and Pink...1. Apollo, Mr. Bentley; 2. Ajax, Mr. Crisp; 3. Alphonso, ditto; 4. Diomede, ditto; 5. Pedro, ditto; 6. Alphonso, ditto.

White Ground, Edged...1. Seedling (Headly's Sarah), Mr. R. Headly; 2. Ditto, ditto; 3. La Tendresse, Mr. Crisp; 4. Ditto, ditto; 5. Ditto, ditto; 6. Seedling (Headly's Sarah), R. Headly.

Light Purple and Grey...1. Porcis, Mr. Ready; 2. Ditto, ditto; 3. Nomius, Mr. Crisp; 4. Ditto, ditto; 5. Porcis. Mr. Ready; 6. Nomius, Mr. Crisp.

Orange...1. Orange Brabançon, Mr. Bentley; 2. Grooten Mogul, Mr. Crisp; 3. Royal Orange, ditto; 4. Orange Boven, ditto; 5. Prince of Orange, ditto; 6. Orange Brabançon, ditto.

Black...1. Seedling (Headly's Mungo Park), Mr. R. Headly; 2. Seedling (Headly's Black Prince), ditto; 3. Diagoras, Mr. Crisp; 4. Naxara, ditto; 5. Ditto, ditto; 6. Variatre, ditto.

Red and White, Striped...1. Le Cœur de France, Mr. Crisp; 2. La Singulaire, ditto; 3. Reine de France, Mr. Ready; 4. La Téméraire, ditto; 5. Cœur de France, Mr. Crisp; 6. Téméraire, ditto.

Olive...1. Seedling (Headly's Mahomet), Mr. R. Headly; 2. Seedling (Headly's Tippoo Saib), ditto; Jaune en Pompadour, Mr. Crisp; 4. Bouquet Sanspareil, ditto; 5. Euphorbia, ditto; 6. Harvey's Olive, ditto.

Buff...1. Fair Quaker, Mr. Ready; 2. Couleur de Perle, Mr. Crisp; 3. Cox's Buff, ditto; 4. Pisistrate, ditto; 5. Fair Quaker, ditto; 6. Ditto, ditto.

Yellow Ground, Edged...1. Seedling (Headly's King James), Mr. R. Headly; Ditto, ditto; 3. Marshal Ney, ditto; 4. Julius, ditto; 5. Prince Galitzin, ditto; 6. Grande Monarque, Mr. Crisp.

Crimson...1. Nouvelle Pallas, Mr. Crisp; 2. Fireball, ditto; 3. Jupiter, ditto; 4. Rubra Magnifique, ditto; 5. Rising Sun, ditto; 6. Jupiter, ditto.

Yellow and Sulphur...1. Geel Kroon, Mr. Crisp; 2. Beroth, ditto; 3. Adrian, Mr. Ready; 4. Eliza, Mr. Crisp; 5. Golconda, ditto; 6. Eliza, ditto.

Coffee Colour...1. Prince George, Mr. Crisp; 2. Orpheus, ditto; 3. Pherebasis, ditto; 4. Germanicus, Mr. Ready; 5. Orpheus, Mr. Crisp; 6. Prince George, ditto.

Red and Yellow, Striped...1. Melange des Beautés, Mr. Crisp; 2. Œillet Gold Stripe, ditto; 3. Scarlet and Gold, ditto; 4. Melange des Beautés, ditto; 5. Scarlet and Gold, ditto; 6. Ditto, ditto.

Shaded White...1. La Singulaire, Mr. Ready; 2. Tillott's Blush, Mr. Bentley; 3. Cooper's Curion, Mr. Crisp; 4. Charlotte, Mr. Cutling; 5. La Singulaire, Mr. Ready; 6. Sophia, Mr. Crisp.

Mottled...Seedling (Headly's Helen Tree), Mr. R. Headly; 2. Ditto, Egyptian Prince, ditto; 3. Ditto, Gypsy King, ditto; 4. Ditto, ditto; 5. Ditto, Egyptian Prince, ditto; 6. Ditto (Headly's Mulatto), ditto.

Scarlet Edged...1. Seedling (Headly's Miss Birch), Mr. R. Headly; 2. Headly's Queen Victoria, ditto; 3. Ditto, ditto; 4. Good Hope, ditto; 5. Queen Victoria, ditto; 6. Ditto, ditto.

Scarlet...1. Jupiter, Mr. Crisp; 2 Bien Fait, ditto; 3. Rising Sun, ditto; 4. Firebrand, ditto; 5. Jupiter, ditto; 6. Rising Sun, ditto.

Miscellaneous...1. Seedling (Headly's Purple Empress), Mr. R. Headly; 2. Ditto (Headly's Diogenes), ditto; 3. Socrates, Mr. Crisp; 4. La Cherie, ditto; 5. Andromade, Mr. Ready; 6. Marshal Soult, Mr. R. Headly.

Seedlings...1. Headly's Aurora, Mr. R. Headly; 2. Headly's King James, ditto; 3. Headly's Sarah, ditto; 4. Headly's Diogenes, ditto.

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VISITS TO NURSERIES. NO. IV.

ROYAL GARDENS, KEW.

HAVING, in our previous notice of these gardens, been drawn aside from what they are and what they contain, to matters somewhat different, though highly interesting to the public,—and being well aware that the lovers of plants have a more deep and personal concern in those gardens, than in any other spot where plants are cultivated,—we return to the subject. Even in this paper, however, all that we can afford room for will be only a brief outline; for some of the stoves, and many of the compartments, are in themselves ample studies, and cannot be fully understood and appreciated until after many visits.

We previously alluded to the delightful situation of Kew, and the facility with which it can be visited from the metropolis, either by land or water, as the visitor may be inclined. One thing however is worthy of remark, as showing the indifference of the British public generally to this their own garden, and the only one to which all have ready and free access:—the steam vessels which ply between London and Richmond neither have a landing place, nor do they in general even pause to set down or take up passengers at Kew. This is an inconvenience which is severely felt by those who wish to visit the gardens; because, in the summer season, when the gardens are most attractive to ordinary visitors, the passage by water is far more delightful than that by land; and row-boat passages are neither so safe nor so pleasant

since the introduction of steam-boats on the Thames. But this inconvenience, or fault,—if it be a fault,—is in no ways chargeable against the owners of the steam navigation; because if there were a demand for landing and embarking at Kew, that demand would of course be as readily supplied there as at other places. We mention this with no imputation of blame to any one; but merely because it shows that the public have an indifference for these gardens, which is neither very wise, nor very creditable to the taste and spirit of the nation. "They manage matters differently in France," and indeed in all the influential states and great cities of continental Europe; for there, collections of plants, for the pleasurable sensations which the view of them affords, for the purposes of botanical study, or as appropriate ornaments to the mansions of the departed, rank high among those national or public matters in which the people take an interest, and which they both admire and respect. The consequence of this is apparent in the continental population, even in those classes which would be reckoned very low in the scale among so well-fed and furnished a people as the British. The humblest peasant or artisan there will go and admire the plants and flowers; but, having free access to them, he neither breaks the one, nor pulls the other. In the British populace, up to a much higher degree,—at least in wealth and all that wealth can afford,—the case is very different. They get to ornamented places by stealth, as it were; and therefore it is difficult for them to keep their hands from picking, or at all events from fingering, the ornaments. This propensity is a mischievous one in so far as public gardens and other ornamented places of resort are concerned; and it is very doubtful whether it does not lead, in too many instances, to conduct of a far more serious nature. The correcting of this propensity by ornamented grounds open to the public, and protected until the inconsiderate part of the public learn to respect them, would be of itself a very salutary matter; and would probably save, in the expense of criminal prosecutions, ten times the amount which the grounds would cost. When this is duly weighed, and the moral effects—the softening of the animal passions, and the elevation of the general character—are taken into the account, they make the paltry saving, of some quarter of a farthing in the year from every one who pays taxes, kick the beam, as lighter than the most filmy gossamer that ever floated in an autumnal sky.

We should apologize, however, for this digression; but really there is no approaching this subject of a national collection of plants from all parts of the world, without feeling strongly and painfully the woeful lack of national tone and taste which there is upon this, and one regrets to add, upon almost all subjects that have a national bearing. We are by far too much individualized; "Every one for himself, and God, and God only, for us all," is the universal maxim; and while it continues to be so, public matters cannot be rightly managed. We believe that this maxim operates less powerfully in the case of florists than in that of any other professional or amateur class; but even here we very strongly suspect that the love, culture, and improvement of the flower, do not hinge so much upon the real merits of the flower itself, as upon the consideration that it is "my flower." As we said, they have less of this than most classes; therefore they may the more easily get rid of it; and then they may assist in relieving their compatriots of what is really a dead weight upon the operation of their talents, and wiping out a national stain which, though we at home see or heed it not, is most palpable to foreigners.

In the royal gardens at Kew, including the pleasure grounds, as well as what more immediately forms the botanical garden, there is every facility for obtaining one of the finest public gardens in the world, whether for pleasure merely, or for study conducted in the most pleasureable manner. The space is ample, admirably situated, finely though gently diversified in surface and soil; and though near enough the metropolis for being visited, it is sufficiently distant for not becoming a haunt for the mere rabble,—and indeed the said rabble will require to pass through many stages of amelioration, before they exchange the skittle-ground of a pot-house for a garden of plants, whatever may be the attractions of the latter to those who are more refined.

Both pleasure grounds and botanical garden are open to the public on Mondays and Thursdays during the season, in addition to the opening of the former as a promenade on Sundays. This is a great improvement on the old system, under which the collection of plants, certainly the grand attraction of the place, was shut on the only day when the grounds were open. This was perhaps no great loss to the majority of the Sunday loungers; but having both grounds and garden open for two week-days

is certainly a great convenience for students of flowers. It ought to be extended to every day in the week; but the scanty sum now devoted to the gardens is probably inadequate to the maintenance of so many attendants as this would render necessary. Indeed it is obviously the want of sufficient funds which is the grand, and hitherto unremoved cause of whatever inferiority may be found in the gardens. Under their stinted circumstances the director and those whom he employs have acted the wisest part that they could possibly have done. They have paid every attention to the plants; and those plants are from so many different regions of the world, so different in their habits, and consequently in the modes of treatment which they require, that none but one intimately skilled in the vegetation of the world, and the various climates to which every section of it is best adapted, can form any thing like an adequate idea of the skill and attention which must have been exerted in bringing the collection to its present state. It has to be borne in mind that many of the plants, especially of those from countries of whose physical circumstances we know the least, have to be raised from seeds; and therefore the cultivator has to study the whole progressive history of the plant.

In visiting the gardens, the direct entry to the botanical garden from Kew Green is not the best one for those who wish to be impressed with the effect of the whole. The way from the pleasure grounds, through the arboretum, is the best. The pleasure grounds are simply a park, consisting of open glades, interspersed with clumps and masses of trees, many of them stately, and not a few different in species from the timber trees of ordinary parks. Still, however, this portion is plain English scenery, with only a slight trace of foreign character here and there. The arboretum, again, contains chiefly plants which are not natives of England, though hardy enough to bear the cold of an English winter. Many of these trees are of stately dimensions; and there was among them a cedar of uncommon majesty and grace, which was unfortunately shattered by a hurricane in the early part of the present year. On the margin of the arboretum there are two conservatories;—the one erected by Sir William Chambers, and as ugly and ill-adapted to its purpose as can well be imagined;—the other, which was erected by William IV., and designed by the late Sir Jeffrey Wyatville, is a simple heathen temple; and although it has the advantage of a span roof, and light on all

sides, yet the massive columns cause the light to fall a little "pale," if not "dreadful," upon the plants. In point of altitude, this is the best of all the glazed houses at Kew; and the plants show a little grateful for being delivered from the dull continuity of an over-topping north wall, without any openings in it.

What motive may have at first induced the constructors of green-houses and stoves so to contrive them as that the contained plants should get light on the one side, and be doomed to darkness on the other, it would not be easy to determine upon any principle at all connected with the philosophy of vegetation; but it is pretty evident that a worse construction could not have been hit upon, even though the object of the parties had been to find out the very worst. Probably the object in view in contriving this clumsy, antiquated, and inappropriate style of conservatory or stove, was to shelter the plants from the north wind; but this shelter, even if there had been any meaning in it, was obtained at an immense sacrifice. If they had looked to nature they would not have failed in discovering the advantages of a northern exposure in all situations except those in which the wind blows violently as through a funnel; and where this is the case a wind from one point of the compass is just as bad as from another. Examine a hill or valley of any degree of steepness, and it will invariably be found that the slope toward the north consists of better soil, and is clothed with richer vegetation, than that toward the south. So also in trees, and especially in pines and other *coniferæ* which abound in turpentine, the timber on a northern slope, or even that of the northern side of a tree, is superior to that on the southern. These northern walls rising to the roof or higher, may be advantageous for the forcing of some descriptions of fruit; but in a botanical garden, though the plants ought always to be well treated, all unnatural forcing tends to defeat the grand object of the establishment. To ascertain to what degree, in what manner, and to what good purpose, plants may be changed by forcing and other artificial modes of treatment, is very valuable to the cultivator of plants, whether his object be flowers or fruit; but in a botanical garden, the chief value of which consists in having every plant as nearly in its natural condition as possible, all artificial modes of treatment are mischievous as well as useless; and we may add, that it would be a great addition to such establishments if they contained the wild types of all plants

that have been much changed by culture, because that would let the cultivator see what his art had accomplished in the cases of those plants; and this would be a strong inducement to the making of new improvements.

The stove or green-house, with the high-backed wall, and single slope of roof from that wall, is attended with many inconveniences;—the chief of which are the absence of light and of air when necessary at one side of the house; and the reducing of a whole collection to a single profile, instead of having four, as there are in a rectangular house with a passage on every side. This last form of house gives a wonderful freedom to the air, even with an equal degree of temperature; and has indeed as many advantages as the other form has defects.

The want of the full light of the horizon, and the stagnation of the air, are especially injurious to those tropical plants, or plants which require artificial heat, or even shelter, for a portion of the year. By far the greater number of such plants grow naturally in light more intense than the greatest heat of the sun in England; and in such places the air, especially when the plants are flowering, is very pure and transparent. Heat may be artificially applied to plants, so as to give them the natural temperature of any climate whatsoever, or even to force them beyond this, when the object of the cultivator requires it; but no contrivance which has hitherto been hit upon can bring up the natural light of the sun to the corresponding degree of intensity; and there seems to be some element wanting in artificial lights, by which want they are rendered unfit for wholesome vegetable action. Therefore, even in the best contrived houses as to light, the plant has to work under a disadvantage; and this disadvantage is always the greater, the more that artificial heat is requisite for bringing the temperature up to that of the native climate of the plant.

The stoves and green-houses in Kew Gardens, with the partial exception of the new conservatory already alluded to, and a small conservatory which is chiefly devoted to a miscellaneous collection of flowering plants, all possess these objectionable qualities in a high degree, with the addition of a most inconveniently low roof in many instances. This is especially the case with the houses devoted to the palms, and other tall plants of warm climates. At times, some of the palms have shown their impatience of this confinement, by pushing their leaves right through the glass of the

roof; and in other instances some of the finest of them are necessarily but woefully mangled by lopping, to keep their dimensions within the scanty room which the parsimony of those who provide the funds has allotted to these grandees of the tropical forest. Now, as the grand value of Kew consists in its tropical plants, or plants requiring the shelter of houses, the parsimony which has kept the houses in their present condition is the grand evil, and the one which ought first to be remedied. Another is the circumscribing of the garden by unseemly brick walls, which encroach upon the one side of it with salient angles like the bastions of a fortification, and on the other break its continuity with the pleasure grounds. These want correction.—But our limits in the mean time are reached, and we must postpone, though not abandon, this national subject.

ON THE PRACTICABILITY OF CAUSING SHRUBS TO FLOWER TWICE IN THE GROWING SEASON.

All plants, of whatever climate they are natives, have a season of rest and a season of growth. In the former, they are almost dormant; in the latter they increase in bulk, and exhibit their flowers and fruit, after which they return again to a state of repose. Intertropical plants are seasonal, not from the alternations of cold and heat, but from the alternating dry and rainy seasons. By the latter they are excited into renewed growth, develope their flowers, and set their fruit to be matured in the dry season. Extra-tropical plants are chiefly affected by summer and winter. Annuals, biennials, and perennials, are all excited into a floriferous habit by the gradually returning warmth of spring, and the solar light of summer; and when the seed or fruit is ripe the energy of the plant declines, and it again, in the case of annuals and biennials, ceases to live; or, if perennial, sinks to its winter's rest.

Bulbous-stemmed plants, which are generally inert during summer, and at that season usually in the drawers or boxes of the florist, may be replanted at any time in the autumn, winter, or spring, as best suits the purposes of the florist as to the time of their blooming; but plants which are constantly in the ground, and which are affected only by the seasons, present their leaves

and flowers as the season prompts. They may be expedited by protection against the depressing effects of cold; and they may be checked by art in a way which remains to be discussed.

If a plant be checked in its first career of growth, especially in developing its reproductive members, it immediately concentrates its vital powers, and makes a second attempt, and, if the summer allows, even a third to complete the final effort of its growth. Consequently, if the season of florescence is wished to be prolonged, we have only to destroy the first buds or shoots, and of course a second set will be produced, and flower a month or two later than the usual period. Suppose we wish to have a second or a continuous bloom of roses:—certain healthy plants should be fixed on; they, at the winter pruning, along with the general collection, should be pruned, but somewhat differently; instead of being spurred-in closely, which is the usual practice, the shoots of the selected trees should be left somewhat longer; and on these the uppermost bud will be first unfolded, and will shoot out with a flower or two on its apex; but this flowering must be prevented, for as soon as the young shoot from the uppermost bud is one inch in length, the old shoot must be again pruned down to the next bud below; which will be evolved in its turn, and produce what may be called a second crop of roses.

A similar result is produced in another way; that is, by removing the trees rather late at the beginning of the growing season, which retards the bloom for a week or a month, according to the length of time the tree is allowed to re-establish itself. To this may be added the practice of layering and stopping the strongest shoots during the summer, which will often bring a late bloom in the autumn. And, besides all these expedients, a selection of the early, late, and ever-flowering sorts, will produce a bloom of roses throughout the summer and autumn.

But it is not the rose only which may be made to flower out of season. The rose-acacia, one of our most beautiful shrubs both in flower and foliage, may be made to bloom twice in the season by pruning. As soon as the first flowers fade, let the shoot that bore them be cut back to within an inch or two of its base; thence young shoots will be produced, bearing a second show of flowers in October sooner or later.

The Laburnum, and indeed all the cytisus tribe, may be made to flower twice, by pruning back their young shoots which have

already flowered. And there is another ornamental shrub, which will readily flower in the autumn, either by a late removal in the spring, or by pruning back in April or May:—we mean the *Althea frutex;* which is a rare and pleasing sight in the fall of the year, when flowers are rather scarce.

There are, doubtless, several other flowering shrubs which by art may be made more floriferous than they naturally are; and even many of our most showy herbaceous flowers, as is well known, may be expedited in flowering by early sowing and protection; and many by pruning or cutting back may have their flowering and beauty prolonged. Even mignonette, candytuft, and other similar border-flowers, are rendered longer attractive by timely cutting-in.

The above are only a few of the expedients to which the flower-gardener who aims at making the finest display on his beds and borders at all times may have recourse. And as it often happens that the owners of the best kept flower-gardens only see them occasionally, or at certain times in the year, the manager should study to have the finest show of flowers he can at the time of the owner's visits. An excellent flower-gardener of our acquaintance cuts off almost all his finest border-flowers a month or six weeks before he expects the family to arrive, in order that a second bloom may come forth when most required. J.

CHANGE OF AIR AND SOIL NECESSARY TO PLANTS.

Flowering plants, as well as all those which are cultivated for their fruit, leaves, or tubers, become more vigorous and luxuriant when removed to a new place or country, than if kept in the country in which they have been raised. This circumstance has been so long observed by cultivators, that several rules of practice are founded upon it. A change of seed from the hill to the valley, and from the valley to the hill, is found profitable management. An exchange of seed between Kent and Northumberland is advantageous to the farmers of each respectively. The same result follows the exchange of bulbs or tubers. Foreign seeds, and all the different descriptions of roots, do better if imported and planted in this country, than if cultivated at home; and the same is the case when English seeds, &c. are carried to the continent.

This extra vigour imparted to strange plants is, however, only temporary; for, in a few years, the plants, or their progeny, become naturalized, and are no longer so much excited by the change of air and soil as they appear to be at first. We may easily and rationally imagine that soil in which the same kind of plant never grew before may be replete with nutritive matter favourable to the stranger, and hence its extra vigour; but how a change of air without reference to any appreciable difference of temperature can effect similar results, is not so easily guessed. But it has been proved, that seeds or plants removed from one soil to another of exactly the same description, but at some distance from each other,—either longitudinally or in different parallels of latitude, not too far from the middle of the temperate zone,—become renovated, and advance with more celerity than if they had not been transplanted; and this they continue to do, though only for a few years.

In considering the aptitudes of wild plants, we see them distributed according to the nature of the soils most suitable to them. For instance, a clayey soil is the natural habitat of the Coltsfoot; a calcareous or chalky soil is known by the prevalence of the Spiked Speedwell and the Little Bed-straw; a flinty soil nourishes the Three-leaved Speedwell and the Viper's Bugloss; the Common Sorrel and Sheep's Sorrel inhabit ferruginous gravels; while Heath, and Spurrey, and Septfoil, are common on dry peat earth; Glass-wort indicates a saline soil; and the Marsh Marigold a moist one; and very dry sand bears the Sheep's Sorrel, Wild Thyme, and Red Sand-wort. Thus it appears, that the nature of the soil fixes the locality of the plants above mentioned. But beside these geological attractions for certain tribes of plants, there are others which appear to be particularly affected by the density of the air. Auriculas never thrive in low damp situations; they are natives of the Alps, where the air is pure and rare: and many other plants are similarly constituted. The density, dryness, and temperature of the air, are its only properties that, we imagine, can materially affect the health of plants; for though it may often be tainted with fuliginous or other noxious vapours, especially near large towns, it is never so much so, as to differ much in general properties over the whole face of a country.

A Rose-tree planted in the near neighbourhood of London continues to thrive only a very short time; but if it be removed to Hounslow Heath, it will gain fresh vigour and become a healthy

plant. The reason assigned is, that the air of London is unsuitable from its impurity, while that of Hounslow is the reverse. In this case, the quality of the soil is unheeded; because if they were exactly alike, the result would be the same. Again, if a Gooseberry-tree, which in Lancashire is so fruitful and luxuriant, were removed to the environs of Paris, in two years' time it would be neither healthy nor fruitful, owing chiefly to the difference of the soil,—the former being a deep rich loam, the latter a lighter soil of less depth, and moreover a drier air. These are exceptions to the general rules relative to the transportation of seeds or plants from place to place. But it is an established fact, that foreign or strange seeds or plants, whenever or wherever required, answer the purpose of the cultivator much better than those of home growth. And there is another circumstance which should always be considered in connexion with this, namely,—that new varieties of any kind of plant, whether useful or ornamental, should always be preferred to old varieties: always remembering that the superiority of new or newly introduced species or varieties only continues for two or three seasons; after which they should be given up for something better. A.

MEMORANDA ON THE CAMBRIDGE GARDEN.

Being at Cambridge the other day, I took a ramble in the Botanic Garden of that university, as well to see my friend, the curator, as to have a view of the collection of plants under his care. In this, I was not a little gratified. Both stove and greenhouse plants were in excellent condition; and, among those in the stove, a few of the Orchidaceæ were finely in flower, although no special means were employed for their encouragement, save only the usual temperature and treatment of the stove.

The hardy plants, whether trees, shrubs, or herbs, are not arranged systematically; but placed according as their bulk, or manner of growth requires, or where they can be most conveniently seen from the walks and paths. There is a *Salicetum*, which is a conspicuous feature, containing a good many species and varieties, and most appropriate for a garden of plants situate in a low fenny country where willows are extensively cultivated,

and which form the principal part of the sylvan scenery on the banks of the river Cam.

The wild plants of the locality are great favourites with the curator, and he grows them in great perfection. Such as the Lythrum salicaria, Epilobium tetragonum, Hottonia palustris, Valeriana dioica, Pinguicula vulgaris, Stachys palustris, and several of the Orchis tribe. All the more choice herbaceous exotics are seen on the borders, as well as all the old and new annuals; and many half hardy trees and shrubs are trained on the surrounding walls.

I noticed here the malady to which the young plants of the old China asters have been subject in most places for these few years past. They seem to be attacked by a minute species of aphis, which distorts the first leaves, and checks the whole plant so much, that it seldom recovers so as to bloom in perfection.

Now, we know that the common aphides, which are so annoying to many cultivated plants, as well in houses as out of doors, are quickly banished by the fumes of tobacco; and why should not this be applied to protect the aster, when particularly required in a flower-garden, as well as any other plant? But how, it may be asked, can we apply tobacco smoke in the open air? We answer, nothing easier. And this expedient we would press on the attention of the flower-gardener, not entirely for the sake of the aster, but for that of many much more valuable plants.

The principal machine required in this business is a well constructed *fumigating bellows*,—certainly the most useful article about a garden. Its use in houses or pits is well known; and it is equally serviceable in the open air, if canvass cloths of sufficient dimensions are previously provided. A fumigating cloth may be fastened over a tree, on a wall, or supported over an infested standard tree, or bush, on the open ground; and, for the protection and insuring a fine bloom on the beds of a rosarium, a good fumigation or two, as soon as the buds are formed, will go far to free the trees from the aphides, as well as the tortrici, for the greater part of the summer; and if repeated in the autumn, the old females might be prevented from depositing their eggs on trees, which they always do at that time.

When only single plants in the stove or greenhouse are infested, they may be put together in a close frame, and there fumigated by themselves, which saves smoking the whole house; and, as to low single plants such as the asters, already alluded to, pinks,

carnations, or other flowers liable to be preyed on by these insects, a hand-glass set over them, and the smoke puffed in below, will free the plants effectually.

In a farmer's garden at Ditton, near Cambridge, I noticed a remarkable variety of the rose, of so brilliant a scarlet that, at the distance of a hundred yards, the bush appears to be decked with field poppies. On making inquiry about it, I found it was an old family favourite, and was called the Austrian rose. The flower is single; and from its habit it appears to be only a variety of the common dog-rose: but in looking into Loudon's list, I find the Austrian to be a variety of the Rosa Gallica lutea, with *yellow-orange* flowers, introduced into this country from Germany in 1506. Be the name what it may, its colour is more intensely scarlet than that of any other of our common species or varieties.

The aphides which encumber the shoots, and the tortrici that roll themselves in the leaves of rose-trees, have been alluded to; but the "worm in the bud," which destroys so many of the first flowers, is an insect called by entomologists the *Lozotænia rosaria*, and if any means could be devised to offend or drive away the mother insect from laying her eggs on or in the buds in autumn, our rosariums would be much more attractive than they usually are, in consequence of the depredations of these pests. The double yellow rose, or briar, one of the most valued of the tribe, is seldom seen in perfection, owing entirely to the attack of the lozotænia, which almost always eats away one side of the bud. Hence it is obvious that there is as much care and skill required in preserving our finest roses, as in propagating and growing them; and, surely, the obtaining of roses in the greatest perfection, is well worth the extra labour of bestowing fumigations on the trees, early enough in the season, so that the scent may not be vitiated by the tobacco smoke.

To the foregoing remarks on the rose I may add, that the petals of *R. Gallica* and *R. Damascena* are collected for the purpose of making infusions and a confection, both much used in medicine. Rose-water and the attar of roses are both procured, says Burnet, from *R. centifolia*. About six pounds of rose leaves will make a gallon of good rose-water; but from two hundred to two hundred and fifty pounds weight are required to yield one ounce of the attar!—hence its high price. M.

ON THE RANUNCULUS.

BY R. P. T.

THE genus Ranunculus, considered botanically, contains nearly fifty species, sixteen of which are natives of Britain, yet only one or two are cultivated as border-flowers. *R. bulbosus* is the buttercup of our meadows, though *R. repens*, *hirsutus*, and *acris*, are all commonly confounded under this name; it is also the "cuckoo-buds of yellow hue" of Shakspeare. The rest are nearly all noxious weeds, possessing a deal of acrid matter, some of them extremely virulent.

R. Asiaticus, the subject of the present paper, is the Ranunculus of our gardens, and a more beautiful object is not easily conceived. Of this species there are upwards of 1,500 varieties known to florists, who divide them into two kinds,—the Dutch, or original kind, and the Scotch, or improved kind. Of these two the Scotch are generally considered the most desirable, being more constant bloomers, and more delicate in point of colouring: for these we are mainly indebted to Mr. Lightbody, of Falkirk, who is a most successful cultivator.

The cultivation of Ranunculi is by many considered difficult. This is an erroneous idea, as may be proved by the many and, in some instances, very splendid exhibitions in the country, and the numerous seedlings that are yearly added to the already nearly endless list of varieties. The management may be placed under the following heads:—first, choice of roots; second, time and manner of planting; third, subsequent treatment.

Now with respect to the choice of roots intended for a show-bed or flower-garden, a good strong root, the tubers of which are firm and large, the crown prominent and downy, without any appearance of mildew, is the best, always rejecting those which look like old sticks; on this much depends, for if bad roots are planted, it is not reasonable to expect good flowers. Secondly, time and manner of planting. There is some difference of opinion among growers as to the best time of planting. Some affirm that roots planted in the autumn grow stronger and bloom earlier; but there is great danger of the roots perishing through frost or

excessive moisture during the winter months; so that it appears safer to plant in the spring, for though they may not bloom so early by a week or ten days, yet that they grow as strong and bloom as well any person may prove, by planting a quantity in the autumn and another in the spring. Speaking from my own experience, I greatly prefer the latter end of February to any other time; for both the earth and atmosphere are then more conducive to vegetation, the first being mellowed by the winter's frost, and the second rendered more genial by the increasing strength of the sun's rays. The roots vegetate almost immediately, which consequently preserves them from the dangers attendant upon a long exposure to the inclemencies of the winter season.

For planting in the spring, the ground should be dug in October, breaking it very fine, and laying in a stratum of fresh cow-dung, about three or four inches thick; this should be laid level all over the bed, about six inches from the surface. The situation should be some warm spot on any free soil. A hazel loam is perhaps the best, though it makes little difference what the soil is; only observe never to plant Ranunculi twice on the same ground. If it is desired to have them in the same place, the earth must be taken out to the depth of one foot and a half, and the hollow filled up with any rich friable earth: leave the beds exposed to the weather all winter. The reason for digging the beds in October is, that Ranunculi do better on a firm bottom than on a loose one; indeed it is a practice with the growers in Holland to beat the bottom of the beds with a wooden beater; but this is not necessary here, our soil being so much stiffer than that in Holland.

The ground being thus prepared, choose a fine day about the end of February to plant in, and having selected the roots and marked out the bed, which should be three feet six inches in width, and of any desired length, with a path at least one foot six inches wide, commence by removing the entire surface of the bed to the depth of an inch and a half; then rake it very smooth and level, draw lines across the bed with a straight lath six inches apart, and a centre one with the garden line; this will greatly facilitate planting; keep the roots four inches asunder in the rows; place the roots firm without pushing them into the earth; and as soon as one sort is planted, enter the name and number of roots planted in a book ruled thus—

Name of Sort	No. of Line in Bed.	Number of Roots Planted
Quixos.	1	3

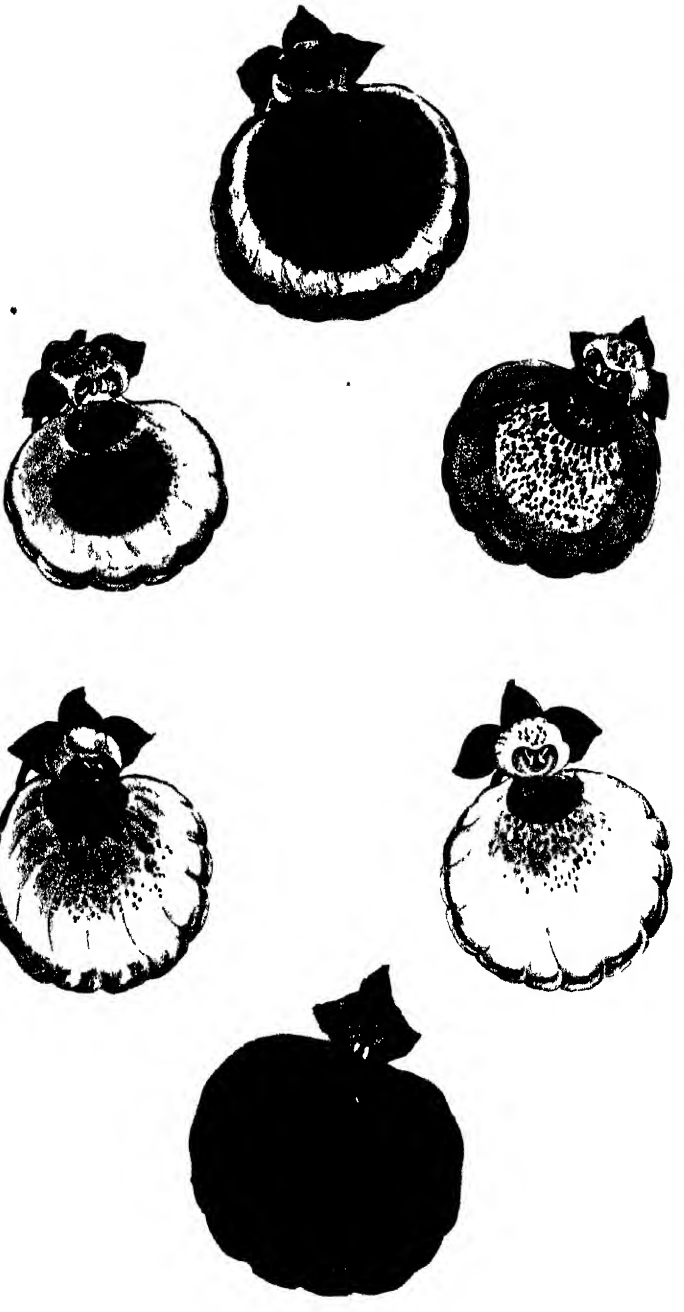
If the sorts are large, it may be simplified by entering the number of lines planted in the second division, and the number of roots over any entire line or row in the third division of the book. When the bed is planted throughout, cover it with the earth taken out, viz. an inch and a half in depth; rake it smooth, and put on a layer of half-rotted leaves; this will answer the double purpose of keeping out frost at time of planting, and also the scorching effects of the summer sun. The use of entering the roots in the book is this: were the sticks placed at the time of planting, it would be impossible to rake or even cover the beds without disturbing them. The number sticks should be placed soon after the foliage appears: the different sorts may then be found with the greatest ease on referring to the book.

ON THE CULTURE OF HERBACEOUS CALCEOLARIAS.

BY MR. JOHN GREEN,

Gardener to Sir Edmund Antrobus, Bart.

Sir,—From the repeated disappointments that several good plant-growers have constantly met with in either losing many of their best kinds, or not growing them satisfactorily, I am induced to send you a brief outline of my method of culture of this most desirable and beautiful family. To do which I commence with the present season. As most of the plants are now going out of flower, no time should be lost in giving every encouragement to the old plants to prepare them for dividing. I have just removed all my plants out of the greenhouse; and all those that have flowered in large pots I turn out, and reduce the ball,—say those that flowered in a No. 12 pot I repot into a No. 24, in a mixture of equal parts of vegetable mould, bog, strong yellow loam and sand; removing at the same time all young flower shoots, which are continually starting up, and if allowed to flower after the season, very much weaken the plant. But I do not cut off



any flowers that are expanded, or stems that still remain fresh, until they are quite decayed; for I am quite convinced that the sap of all leaves, flowers, and stems of herbaceous plants that have arrived at maturity, as they naturally decay, returns to the root, gives it proper health and strength, on which the future success so much depends; for if they become weak and sickly from any improper management in autumn, they seldom recover and do well. I then place them in a cool frame or pit, always keeping them moist, but not wet, taking care that the crowns of the plant and foliage are as dry as possible, clearing away at all times all decayed leaves, and giving them a free circulation of air; they will in about three weeks put out a quantity of side shoots sufficiently long. Then I earth them up with light sandy loam; in a short time the young shoots will be strongly rooted. Then I take them off, and put them in small pots, and place them in a close moist frame, giving them a slight shade. I next place them for the winter on a warm and airy shelf in the greenhouse, repotting as they require, never allowing them to get pot-bound; and as the season advances, I add a little more of the loam to the mixture, and a little well-rotted dung, in all cases paying particular attention to plenty of drainage. The plate of the present number contains representations of some of my seedlings; they are drawn somewhat smaller than the flowers are when in perfection. The four flowers in the middle of the plate are herbaceous, and the top and bottom are shrubby kinds, seedlings of the present summer. An early number, Sir, may contain figures of my new shrubby kinds, and a continuation of the account of my mode of treatment.

I am, Sir, yours, &c.

Lower Cheam. JOHN GREEN.

[We shall pay every attention to the favours of Mr. Green, and of every other cultivator of flowers of equal skill and success.—EDITOR.]

THE WEATHER FOR JULY.

THE state of the weather during the last twelve months has been very unusual; so much so, indeed, that it seems likely that we shall require another winter, and probably part of another summer, before it returns to the average of ordinary English seasons. In the latter part of April, toward the close of the long period of drought, the reflection of heat from the earth was so great, that the average of the thermometer in the sun was above 100°, and the maximum 114°; and even more in some situations. This was a close approxima-

tion to tropical heat, a remarkable occurrence at so early a period of the season; but as this great heat of the atmosphere during the day was occasioned by surface reflection, the earth itself was deprived of that benefit of the solar beams which it would have received, had there been less of their action reflected into the air, and more left to penetrate into the soil; for it is the portion so penetrating that is especially beneficial to everything that grows. One can readily understand this upon considering that finely polished metal, a looking-glass, or even a concave mirror, the concentrated rays in the focus of which are powerful enough to turn or melt very stubborn materials, remains cool all the while.

When the rain came in the latter end of April, it, together with the heated atmosphere, gave a sudden start to vegetation of all kinds; and in consequence of this, and the rankness of the forced herbage which it drew up, there was very serious disease among cattle, especially in those districts where dry and wiry grass was instantly followed by over-succulent produce of this unnatural forcing. There was, however, no heat in the earth to keep up this great vegetable action, and the result was, that the evaporation soon reduced the temperature to below what it is in ordinary years. This has told more or less upon all herbaceous plants in the open ground, more especially upon the more delicate bulbous and tuberous ones; and there is considerable danger that anemonies, ranunculuses, lilies, and various others, will have received injuries that may require more than one year before they are repaired. Hard dry weather soon followed, and was succeeded by occasional showers, as we mentioned in our notice for June. The same description of weather as to drought and moisture—the former predominating on the whole—continued through July; and as the day atmosphere was often clouded when no rain fell, the temperature was very low. In the shade it hardly ever exceeded 67°, and the average in the sun was full 20° lower than in April; while the nights were generally chilly, and the lowest temperature not on the average much above 50°. About the middle of the month the temperature at the coldest time sunk below 48°; and on the 13th there were violent hail-storms on some of the heights. Neither these nor the showers of rain were, however, followed by that kindly and refreshing warmth, which in ordinary seasons follows summer showers; and the moisture had scarcely evaporated before the wind became as unkindly as before. Upon the whole the month, though there has been a very seasonable succession of dry and wet, has been as unfavourable in respect of temperature, as a month of July could well be. The grand cause of this is the saturation of the earth to a much greater depth than usual by the long protracted rains of the preceding autumn, winter, and early spring. In a year, which has scarcely a parallel in recent times, it would be dangerous for any one, except those who pretend to be licensed by the stars, and more particularly by the moon, to predict what is to happen; but a pretty heavy fall of snow during the ensuing winter may not unnaturally be expected; and it would be the best means of restoring the soil generally to its usual tone. The cultivator of flowers will also require to exercise more than ordinary care in his autumnal treatment of them, so as to provide against the chance of a severe winter. To enter upon that during the present month would, however, be rather premature.

CALENDAR FOR AUGUST.

STOVE.—Great attention is requisite in giving air, attending to watering, &c. Repot any fast growing plants. The red spider is often found very troublesome at this season. As soon as it appears, water the plants frequently with the syringe, throwing on forcibly; also water the paths, &c. a humid atmosphere being fatal to them. Continue to dry off Amaryllis.

GREENHOUSE.—Cammellias must not be over watered, as it acts as a stimulus, which must now be avoided, they requiring nearly the contrary. Earth up Oranges, Citrons, Oleanders, &c. Propagate Cacti, and all other succulents. This is a good time to propagate Geraniums, and indeed all other plants of which an increase is desired. Give a bountiful supply of air and water Continue to leave air at night, unless towards the end of the month it should be colder.

Balsams, Cockscombs, Amarynths, &c. should now occupy the places of those plants which are placed out of doors.

FLOWER GARDEN.

Finish laying Picottees as early as possible. The most valuable kinds of Dahlias may still be propagated, either under a hand glass, or in an old melon bed. The earth between the blooming plants should be loosened. Keep the plants tied up. Look closely after the earwigs. Those blooms intended for exhibition must be shaded.

Finish pipeing Pinks, Pansies, and all biennials.

Iris, and all other bulbous rooted plants, whose leaves are dead, may now be taken up, either for removal or for storing. Plant out late ten-week Stocks.

American plants require some care now. Those which have perfected their growth should be kept rather dry, to give solidity to the wood; while the others should be encouraged as much as possible Repot Auriculas: for this use clean pots, and a good drainage, as much depends on keeping them dry through the winter. Pot them in a light rich soil, and keep them in a cool shaded place through the month. Water them lightly as they require it. Prick out seedlings, and put the offsets, three or four together, round the edge of the pot.

Tulips, Lilies, Hyacinths, Irises, and other hardy bulbs, may now be sown in boxes or pans: they will require a cold frame during winter.

Clip box and other edges. Seeds must now be constantly attended to, especially the more choice kinds of greenhouse and hothouse seeds; they require looking over at least once or twice a day. If the Rose trees are infested with the green fly, syringe them on a still evening; this will knock a great many off, and disturb the rest; and if repeated two or three times, it will effectually rid the trees of these pests. The ground should be stirred up at each watering, so as to bury those that fall. Chrysanthemums must now be repotted. Keep the plants in a warm situation out of doors, and watered when the sun shines on them. This, though highly injurious to any other plant, will be found beneficial to these.

FLORAL INTELLIGENCE.

May 23. MIDDLETON. Tulip Show, at the Woodman Tavern.

Feathered Bizards...1. Mr. J. Smithies, Surpass Catafalque; 2. Mr. W. Barlow, Trafalgar; 3. Mr. E. Hilton, Goud Beurres; 4. Mr. J. Taylor, Sovereign; 5. Mr. J Hilton, Firebrand; 6. Mr. L. Ashmole, Crown Prince; 7. Mr. J. Smithies, Needham's Anthony; 8. James Lister, unknown.

Feathered Byblœmens...1. Mr. J. Heap, Black Baguet; 2. Mr. L. Ashmole, Grotius; 3. Mr. J. Taylor, unknown; 4. Ditto, Washington; 5. Mr. J. Smithies, Franciscus Primus; 6. Mr. S. Ashton, Seedling; 7. Mr. R. Wellens, Fair and Nice; 8. Mr. J. Taylor, Maitre Partout.

Feathered Roses...1. Mr. J. Smithies, Lady Crewe; 2. Mr. J. Taylor, Dolittle; 3. Mr. J. Smithies, Glory of Walworth; 4. Mr. L. Ashmole, Iphigenia; 5. Ditto, Hero of the Nile; 6. Mr. W. Barlow, Duc de Bronte; 7. Mr. J. Smithies, Holden's Rose...8. Mr. S. Ashton, unknown.

Flamed Bizards...1. Mr. W. Barlow, Albion; 2. Ditto, Surpasse la Cantique; 3. Mr. J. Hilton, Cato; 4. Mr. L. Ashmole, Black Prince; 5 Mr. E. Hilton, unknown; 6. Mr. L. Ashmole, Liberty; 7. Mr. J. Smithies, unknown; 8. Mr. L Ashmole, Lustre.

Flamed Byblœmens...1. Mr. J. Taylor, Black Baguet; 2. Mr. L. Ashmole, Incomparable Premier Noble; 3. Mr. J. Smithies, Vulcan; 4. Mr L. Ashmole, Violet a fon Noir; 5. Mr. J. Hilton, Gadsby's Magnificent; 6. Mr. J. Smithies, Ameda; 7. Ditto, Laura; 8. Mr. J. Heap, Diana Bruin.

Flamed Roses...1. Mr. J. Smithies, Rose Unique; 2. Mr. L. Ashmole, Vesta; 3. Mr. J. Heap, Reine de Cerise; 4. Mr. E. Hilton, Iphigenia; 5. Ditto, Walworth; 6. Mr. J. Heap, Hero of the Nile; 7. Mr. J. Smithies, Rose Imperial; 8. Mr. J. Hilton, Triomphe Royale.

Bizarre Breeder...1. Mr. W. Barlow, Dutch Catafalque; 2. Mr. S. Ashton, Seedling.

Byblœmen Breeders...1. Mr. S. Ashton, Catharina; 2. Mr. L. Ashmole, Bradley Breeder.

Rose Breeder...1. Mr. L. Ashmole, Duchess of Newcastle; 2. Mr. J. Taylor, Lady Crewe.

Selfs...Mr. S. Ashton, Min d'Or; 2. Mr. L. Ashmole, White Flag.

June 25. EAST SURREY FLORISTS' SOCIETY. Prizes awarded.

Pinks...1. Mr. William Everest, Tooting, Omega, Henham Lass, Unknown, George Kelson, Sir John May, Wiltshire Hero, Lady Hallowell, Bray's Seedling, Lady Stanley, Earl of Cheltenham, Shakspeare, Beauty; 2. Mr. R. Henbrey, Croydon, Omega, Willmer's Queen, George Kelson, Earl of Uxbridge, Lady Hallowell, Turner's King, Triumphant, Humber's Champion, Victorious, Earl of Cheltenham, White's Warden, Norman's Glory; 3. Mr. J. Denby, gardener to the Rev. — Mapleton, Mitcham, George Kelson, Goliath, Colonel Taylor, Shakspeare, Victorious, Eclipse, Cascell's, Mrs. Hopkins, Countess of Plymouth, Lady Hallowell, Henham Lass, unknown; 4. Mr. C. Pimm, Bedington; 5. Mr. J W. Dalton, Mitcham; 6. Mr. Tagg, Croydon; 7. Mr. J. C. Everest, Bedington; 8. Mr. Agate, Croydon; 9. Mr. Ferry, Bedington; 10. Mr C. Edwards, Stockwell.

Seedlings...1. Mr. Agate, Croydon, Prince Albert; 2. Mr. W. Everest, Tooting, ditto; 3. Mr. C. Pimm, Bedington, ditto.

Roses...1. Mr. Ferry; 2. Mr. Pimm.

Heartsease...1. Mr. Dalton; 2. Mr. Pimm.

A find stand of Heartsease exhibited, not for competition, by Mr. R. Henbrey, Croydon.

June 30. HORNCASTLE FLORAL AND HORTICULTURAL SOCIETY. Prizes awarded.

MEMBERS' PRIZES.

Balsams...1. and 2. Mr. Kenrick; 3. Mr. Smith.
Best Annual, best Stock, and 3d ditto, and best Petunia, Rev. J. Fawcett.
Second best Petunia, Mr. Crowder; 3d ditto, Rev. J. Fawcett.
Best brace of Cauliflowers...Mr. Wilson.
Best brace of Cos Lettuce...Dr. Barton.
Best dish of Parsley...Rev. H. Hotchkin.

JUDGES' EXTRA PRIZES

Nicotiana Odorata...Mr. E. Babington.
Carrot-rooted Turnip...Rev. R. Hotchkin.
Cottagers' Prizes numerous.

SOUTH ESSEX HORTICULTURAL SOCIETY. The following Prizes were awarded:—

Collection of 12 Stove and Greenhouse Plants, Nurserymen's Class...Mr. T. Fraser, Lea-bridge-road.
Ditto, Gardeners'...Mr. Kyle, gardener to Robt. Rowley, Esq.
Small Collection of 6 Plants...1. Mr. R. Smith, gardener to A. Willis, Esq. Wanstead; 2. Mr. Hosegood, gardener to T. Brooks, Esq.
12 Geraniums...1 Mr. Fraser; 2. Mr. Pamplin, Walthamstow.
6 ditto...1. Mr. Knott; 2. Mr. Kyle.
Ericas, Collection of 4...1. Mr. Fraser; 2. Mr. Kyle.
Balsams...1. Mr. Knott; 2. Mr. Smith.
Cockscombs...Mr. Knott.
Fuchsias...Mr. Kyle.
Cut Flowers...1. Mr. Knott; 2. Mr. Pamplin.
Seedling Cactus...Mr. Protheroe, Leytonstone.
Heartsease, Nurserymen's...1. Mr. Henchman, Edmonton; 2. Mr. Pamplin; 3. Mr. M'Pherson.
Ditto, Amateur's Class...Mr. Poole, Walthamstow.
Roses...1. Mr. Fraser; 2. Mr. M'Pherson.
Ditto, Gardeners' Class...1. Mr Smart; 2. Mr. Kyle.
Ranunculuses...Mr. M'Pherson
Dahlias...1. Mr. Robertson; 2. Mr. Gadd.

There was a good show of fruit, but we have not received a list of Prizes.

June 30. WALLINGTON. Pink Show.

1st Prize...Mr. R. Henbrey, Croydon, Foster's William IV., Omega, Earl of Uxbridge, Willmer's Queen Victoria, Blackheath Hero, Weeden's Queen Victoria, One in the Ring, Lady Auckland, Steven's Sir George Cook, Lady Hallowell, Earl of Cheltenham, George Kelson; 2. Mr. Graham, Carshalton, Lord Brougham, One in the Ring, Omega, Lady Hallowell, Sealey's Queen, Rosanah, Bexley Hero, Willmer's Queen, Deakin's Sir Francis, George Kellson, Earl of Cheltenham, Lady Auckland; 3. Mr. Bridges, Carshalton, Morning Star, Sealey's Queen, Harris's Emma, Willmer's Queen, Lady Hallowell, Lady Auckland, Omega, Kelner's No. 1, White's Harden, Earl of Cheltenham, Kellson's Emma, George Kellson; 4. Mr. Edwards, Clapham; 5. Mr. Heath, Clapham; 6. Mr. Agate, Croydon; 7. Mr. Denby, gardener to the Rev. — Mapleton, Mitcham.
Mr. Agate, Seedling Prize, Prince Albert.
A fine stand of Heartsease, principally Seedlings, was exhibited by R. Henbrey, Croydon.

COVENTRY AND WARWICKSHIRE HORTICULTURAL SOCIETY. Prizes awarded.

PLANTS AND FLOWERS.

Stove Plants...1. Chinchona floribunda, Viscountess Hood; 2. Manettia glabiata, ditto; 3. Euphorbia splendens, Mr Sandiers, Coventry.
Greenhouse Plants...1. Fuchsia fulgens, Mrs. Howe, Coventry; Melaluca hypericifolia, J. Beech, Esq. Brandon House; 3. Helichrysum speciosum, Viscountess Hood.
Geraniums...1. Foster's Alicia, Viscountess Hood; 2. Splendidissimum, ditto; 3. Fosteria rosea, Mr. W Clark, Coventry; 4. Foster's Gem, Viscountess Hood.
Best group of 6 ditto...Not named.
Ericas...1. Ventricosa, Viscountess Hood; 2. Mammosa, ditto; 3. Viride, ditto.
Calceolarias...1. Conspicua, Viscountess Hood; 2. Not named, 3. Rembrandt, Viscountess Hood.
Alstrœmerias...1. Pelegrina, Viscountess Hood; 2. Aurea, ditto; 3. Pelegrina, Earl of Craven.
Pansies, best group of 24...Not named.
Ditto of 12...Ditto.
Stocks...1. Brompton, Earl of Craven; 2. Ditto, ditto; 3. Ditto, ditto.
Roses...1. Ne plus Ultra, Mr. Sandiers, Coventry; 2. Crimson perpetual, Earl of Craven; 3. Wellington, ditto; 4. George the Fourth, ditto.
Group of 6 ditto...Not named.
Pinks and Ranunculuses...Not named.
Tender Annuals in pots...1. Rodanthus Manglesii, Mrs. Howe; 2. Schyzanthus pinnatus, ditto.
Groups of Flowers...1. Viscountess Hood; 2. Mr. J. Cole, Rugby; 3. Viscountess Hood.

EXTRA PRIZES.

Cut Flowers...Earl of Craven.
Seedling Geraniums...Mr. Sandiers, Coventry.
Seedling Amaryllidæ...Earl of Craven.
Seedling Geranium...Mr. Sandiers, Coventry
Lobelia Erinus...Mr. W. Clarke, Coventry.

July 1. LEICESTERSHIRE FLORAL AND HORTICULTURAL SOCIETY.—At the second exhibition this season, the Judges' awards were as follows :—

PINKS.—FIRST CLASS.

First pan of 6...Mr. R. Marris, with Marris's Emma Louisa Jane, and Lady of the Lake, Bosson's Elizabeth, Admiral Codrington, and a seedling.
Second ditto...Mr. G. Hudson, of Kingston, with six seedlings.
Third ditto...Mr. J. Pearson, jun. of Chilwell, with Faulkner's Perfection, Pearson's Tyrian, Faulkner's Dreadnought, Fear Nothing, and two unknown.

PINKS.—SECOND CLASS.

First pan of 3...Mr. G. Hudson, of Kingston, with Faulkner's Duke of St. Albans, and two seedlings.
Second ditto...Mr. R. Marris, with Marris's Emma Louisa, Marris's Jane, and Brundrett's Humphrey Cheetham.
Third ditto...Mr. J. Pearson, jun. of Chilwell, with Faulkner's Perfection, Faulkner's Dreadnought, and Unknown.

ROSES.—FIRST CLASS.

First pan of 6...Mr. J. Pearson, jun. of Chilwell, Notts, with Lady Stewart, Velours Episcopal, Brennus, Luxemburg Moss, Ne plus Ultra, and Oracle du siècle.
Second ditto...R. W. Wood, Esq. with Madam Hardy, Prolific Moss, Charles the Twelfth, Vesta, and 2 unknown.
Third ditto...Mr. J. Pearson, jun. with Cramoisi Supérieur (China), Lady Stewart, Josephine Beauharnois, Grandissima, Favourite Purple, and Offiong.

ROSES.—SECOND CLASS.

First pan of 3...Mr. J. Pearson, jun. with Hypocrate, Lilac Queen, and Aspasia.
Second ditto...Ditto, (Bourbon Roses) Augustine Marguerette, Madame Desprez, and Augustine Lelieur
Third ditto...Ditto, (Moss Roses) Bath White, Crested, and Luxemburg.

ROSES IN CLASSES.

Purple...1. Lilac Queen, Mr. J. Pearson, jun.; 2. Miralba, ditto; 3. Princess Augusta, ditto; 4. Unknown, Mr. J. Smalley; 5. Unknown, R. W. Wood, Esq.; 6. Unknown, Mr. J. Smalley; 7. Unknown, R. W. Wood, Esq.; 8. Afleur Marbre, Mr. J. Pearson, jun.
Moss...1. Crested, Mr. J. Smalley; 2. White Bath, Mr. J. Pearson, jun.; 3. Blush, Mr. G. Walker; 4. Province, Mr. G. Cuff; 5. Crimson, ditto; 6. White, ditto; 7. Luxemburg, Mr. J. Pearson, jun.; 8. Unknown, Mr. G. Cuff.
Crimson...1. Vesta, R. W. Wood, Esq.; 2, 3. Unknown, Mr. G. Walker; 4. Fulgens, Mr. Pearson, jun.; 3. Bonne-gen-vive, ditto; 6. Ne plus Ultra, ditto; 7. Unknown, Mr. G. Walker; 8. Triumphe di Guerrin, W. Seddon, Esq.
Mottled or Striped...1. Unknown, Mr. G. Walker; 2. Ditto, R. W. Wood, Esq.; 3. Village Maid, ditto; 4. Duke of Devonshire, W. Seddon, Esq.; 5. Unknown, Mr. G. Walker; 6. Ditto, ditto; 7. Ditto, Mr. G. Cuff; 8. York and Lancaster, ditto.

PINKS IN CLASSES.

Purple Laced...1. Faulkner's Perfection, Mr. J. Pearson, jun.; 2. Duke of St. Alban's, Mr. R. Marris; 3. Dreadnought, Mr. J. Pearson, jun.; Marris's Emma Louisa, Mr. W. Mitchell; 5. Seedling, Mr. G. Hudson; 6. Ditto, Rev. S. Wigg; 7. Ditto, ditto; 8. Admiral Codrington, Mr. R. Marris.
Red Laced...1. Seedling, Rev. S. Wigg; 2. Admiral Codrington, Mr. R. Harris, jun.; 3. Bosson's Elizabeth; 4. Seedling, Mr. G. Hudson; 5. Princess Charlotte, J. F. Prosser, Esq.; 6. Unknown, Rev. S. Wigg; 7. Unknown, Mr. W. Mitchell; 8. Unknown, Rev. S. Wigg.
Black and White, or Plain...1. Seedling, Mr. G. Hudson; 2. Westlake Hero, J. F. Prosser, Esq.; 3. Parry's Union, ditto; 4. Unknown, Mr. R. Harris, jun.; 5. Seedling, Mr. Hudson; 6, 7, 8, Seedlings. Mr. R. Marris.
First and Second Pans of 12 Pansies...Mr. R. Harris, jun.
First Pan of 6 ditto...1. Mr. J. Coleman; 2. Ditto, Mr. J. Smalley.
Best 6 Stove Plants...Mr. Freer, gardener to J. Bankart, Esq. with Vinca Rosea, Vinca Alba, Ruella Formosa, Caladium Bicolor, Tradescantha Discolor, and Gloxina Caulescens.
Best 6 Greenhouse Plants...Mr. Freer, ditto, Nerium Splendens, Hibiscus Rosa Sinensis, Agapanthus Umbellata, Erica Boweii, Hibiscus Fulgens, and Fuchsia Conica.
Second ditto...Hibiscus Rosa Sinensis, Erica Boweii, Helitropium Peruvianum, Fuchsia Gracilis, Petunia, and King's Cineraria.
Best 6 Geraniums...Mr. Mott, with Iris, Duchess of Sutherland, Colossus, Dennis's Victoria, Gem, and Virginus.
Second Ditto...Mr T. Christian, gardener to J. Philips, Esq.
Best Ranunculuses...J. F. Prosser, Esq.
Second Ditto...Mr. J. Smalley.
Best Pair of (Celosia Cristata) Coxcombs...T. Burgess, Esq. Wigston.

EXTRA PRIZES.

Mr. Greasley, Northgate-street, for a stand of Seedling Pinks.

July 4. HORTICULTURAL SHOW, CHISWICK.

The leading feature of this Exhibition was the show of Roses, but most of them were much disfigured by the storms of wind and rain of the previous day.

Carnations, Nurserymen ... Silver Knightian Medal, Mr. Willmer, Sunbury; Silver Banksian, Mr. Hogg, Paddington.

Pinks...Silver Knightian, Mr. Bridges, Hampton; Silver Banksian, Mr. Weeden, Hillingdon; Ditto, Mr. Allway.

Ditto, Nurserymen...Silver Knightian, Mr. Willmer; Silver Banksian, Mr. G. King.

Picotees...Silver Knightian, T. Barnard, Esq., Brixton; Ditto, Mr. Willmer, Sunbury; Silver Banksian, Mr. Hogg.

Pelargoniums...Gold Banksian, Mr. Cock, Chiswick.

Ditto, Nurserymen ... 1. Ditto to Mr. Catleugh, Sloane-street; 2. Large Silver Medal, Mr. Gaines, Battersea.

Seedling Calceolar as...Silver Knightian, Mr. Green.

Large Collections of Stove and Greenhouse Plants...1. Gold Knightian Medal, Mrs. Lawrence; 2. the Gold Banksian to Mr. Redding, gardener to Mrs. Marryatt.

Small Collections...Gold Banksian medals, being three equal first prizes, to Mr. W. Barnes, gardener to J. Norman, Esq., Bromley; Ditto, Mr. Bruce, gardener to B. Miller, Esq., Tooting; Ditto, Mr. Green, gardener to Sir Edmund Antrobus. Large Silver medals, being two equal second prizes, to Mr. Davis, gardener to Sir Simon Clark; and Mr. Pratt, gardener to W. Harrison, Esq., Cheshunt; 3. Silver Knightian, to Mr. James Barnes, gardener to Sir Herbert Jenner.

Heaths, Collections of 30 Species...1. Gold Knightian, Mr. W. Barnes; 2. Large Silver, Mr. Butcher.

Ditto, for Nurserymen...1st prize, Gold Knightian, withheld; 2d, Gold Banksian, Mr Jackson, Kingston.

Heaths, small Collections of 6 Species...Large Silver, Mr. Pratt.

Ditto, Nurserymen's...Large Silver, to Mr. Pamphin.

July 9. BARROWFORD PINK SHOW. Prizes awarded.

Pan of three Pinks, purple-laced...1. Mr. Brightmore, Duke of St, Alban's; red-laced; Mars; black and white, Helen the Fair; 2. Mr Grimshaw, purple-laced, Robin Hood, red-laced, Comet; black and white, Parry's Union; 3. Ditto, purple-laced, Robin Hood; red-laced, Comet; black and white, unknown.

Purple-laced...1. Mr. Benjamin Moore, Mars; 2. Mr. Grimshaw, Lustre; 3. Miss Preston; 6. Perfection; 7. Unknown; 8. Prudence; 4. Mr. L. Whittam, Greenside; 5. Mr. Brightmore, Duke of St. Alban's.

Red-laced...1. Mr. Brightmore, Mars; 2. Unknown; 3. Unknown; 4. Mr. Benjamin Moore, Day Break; 5. Mr. Grimshaw, Dreadnought; 6. Seedling.

Black and White...1. Mr. Brightmore, Snowball; 3. Helen the Fair; 2. Mr. Benjamin Moore, Omnibus; 4. Mr L. Whittam, Unknown.

July 17. YORK AMATEUR FLORIST SOCIETY. Splendid variety of Ranunculuses and Pansies.

Premier Prize for the best Ranunculus of any colour...Mr. Aspinall, La Téméraire.

Dark, or Dark Purple...1 Mr. Dove; 2. Mr. Fawbert; 3, 4, 5 Mr Cowper, all Naxara.

Yellow, or Sulphur...1, 2. Mr. Fawbert Orna; 3. Mr. Dove, ditto; 4. Mr. Aspinall, Model of Perfection; 5. Mr. Hardman, Bracian.

White Stripes...1. Mr. Cowper, Oresis; 2. Ditto, La Téméraire; 3. Ditto, Oresis; 4. Mr. Hardman La Téméraire; 5 Mr. Cowper, ditto

Yellow Spotted, Mottled, or Edged...1, 2, 3, 4. Mr. Fawbert, Julias and Arbrisseau; 5. Mr. Cowper, Julias.

Crimson, Pink, or Rose...1, 3, 4, 5. Mr. Cowper; 2. Mr. Aspinall, all Henrietta.

White Spotted, or Mottled...1, 2, 4. Mr. Cowper, Hannibal; 3, 5. Mr. Fawberg, Wirtemberg.

Light Purple...1, 2, 3, 4, 5...Mr. Fawbert, Summum Bonum.

Yellow Striped...1 Mr Aspinall, Mélange des Beautés; 2, 3. Mr. Cowper, ditto.

Whites...1. Mr. Hepton; 2, 5. Mr. Cowper; 3, 4. Mr. Fawbert, all Argus.

Olives...1, 2. Mr. Fawbert, Brudishlud; 3, 4. Mr. Fawbert, Alcibiades; 5. Mr. Stead, unknown.

White Flowers, edged...1, 2, 3. Mr. Aspinall, La Téméraire; 4. Mr. Fawbert, Lady Gower; 5. Mr. Cowper, Apollo.

Greys...1, 2. Mr. Fawbert; 3, 5. Mr. Dove; 4. Mr. Cowper, all Veriat.

Red, or Scarlet...1. Mr. Fawbert, Domingo; 2. Ditto, Conqueror of the Indies; 3. Mr. Cowper, Exquisite; 4 Ditto, Domingo; 5. Ditto, Dorus.

Orange, or Buff...1. Mr. Aspinall, Cox's Buff; 2, 3, 4. Mr. Aspinall, Bracai; 5. Mr. Steward, Cox's Buff.

Pansies, best tray of 6...1. Mr. Hepton, Amato, Eliza, Mulberry, Marshall Soult, Victoria, and Lovegrove's Coronation; 2. Mr. Hepton, Mulberry, Shakspeare, Enterprise, Lovegrove's Coronation, Lord Glamis, and Victoria; 3. Mr. Duke, Wellington, Fairy Queen, Mulberry, Lovegrove's Coronation, Lavalette, and Thompson's Coronation.

The Pink and Pansy show was held on the 29th July. Mr. Land and Mr. Wilkinson officiated as judges. Prizes:—

Laced Pinks...1, 2. Mr. Hepton, Sir E. Codrington; 3. Ditto, Crucifix; 4. Ditto, Elizabeth; 5. Ditto, Hardman's Incomparable.

Plain Pinks...1. Mr. Steward; 2, 3, 5 Mr. Hepton; 4. Mr. Duke, all Parry's Union.

Pansies, best tray of 12...1. Mr. Hepton, Lovegrove's Coronation, Eliza, Victoria, Amata, Lord Glamis, Shakspeare, Rainbow, Mulberry, Thompson's Coronation, Enterprise, Unique, and Masterpiece; 2. Mr Hepton, Rainbow, Mulberry, Lovegrove's Coronation, Blandina Superba, Eliza, Victoria, Shakspeare Lord Glamis, Enterprise, Fairy Queen, Angelina, and Page's No. 1; 3. Mr. Duke, Lovegrove's Coronation, Lady Peel, Lavalette, Victoria, Usher's Queen, Alpha, Captain Parry, Fairy Queen, Mulberry, Isidoris, and two Seedlings.

Best tray of 6...1. Mr. Hepton, Amato, Eliza, Lovegrove's Coronation, Masterpiece, Victoria, and Rainbow; 2. Mr. Hepton, Victoria, Eliza, Blandina Superba, Masterpiece, Enterprise, and Hon. Mrs. Harris; 3 Mr. Duke, Fairy Queen, Wellington, Seedling, Mulberry, Enterprise, and Blandina Superba.

June 18. ANDOVER HORTICULTURAL SHOW. Prizes awarded.

Best Greenhouse Plant (Fuchsia Standishii)...1. Mr. Sheppard, of Winchester; 2. (Salvia Patens), Mr. Robinson, gardener to E. R. Tunno, Esq., Amport House; 3. (Fuchsia Fulgens Globosa), ditto.

Geraniums...Not named.

First best seedling ditto...Mr. Sheppard; second ditto, extra prize, Mr. Stewart, gardener to Sir J. W. Pollen, Bart., M.P., Redenham House.

Herbaceous Plants...Not named.

Pansies...Ditto.

Roses...Ditto.

Best Dish of Strawberries (mixed)...Mr. W. Prestoe, Andover.

Extra prize for good flavoured ditto (seedling, early Mays), ditto, beating Keene's Seedling, Groveend Scarlet, and Early Pine.

Best Dish of Cherries (May Dukes)...Ditto.

Melon...Sort not named.

Vegetables...Ditto.

WARRINGTON TULIP AND HORTICULTURAL SHOW.

Premier Prize...Roi de Cerise, Mr. Hardy.

Feathered Bizarres...1. Surpasse Catafalque, Mr. Hardy; 2. Old Dutch Catafalque, Mr. Wilson; 3. Demetrius, Mr. Hardy; 4. Duc de Savoie, Mr. Wilson; 5. Platoff, ditto; 6. Firebrand, ditto.

Flamed Bizarres...1. Garricola, Mr. Wilson; 2. Unknown, Mr. Nunnerley; 3. Charbonnier, Mr. Wilson; 4. Black Prince, Mr. Heath; 5. Lustre Beauty, Mr. Hardy; 6. Surpasse La Cantique, Mr. Wilson.

Feathered Roses...1. Heroine, Mr. Hardy; 2 Holden's Rose, Mr. Heath; 3. Dolittle, Mr. Nunnerley; 4. Walworth, Mr. Wilson; 5. Hero of the Nile, Mr. Hardy; 6. Compte de Vergennes, Mr. Wilson.

Flamed Roses...1. Roi de Cerise, Mr. Hardy; 2. Rose Unique, Mr. Wilson; 3. Rose Vesta, Mr. Penketh; 4. Lord Hill, Mr. Wilson; 5. Vulcan, Mr. Hardy; 6. Unknown, Mr. Bloor.

Feathered Byblœmens—1. Washington, Mr. Nunnerley; 2 and 3. Baguet, Mr. Hardy; 4 Grand Financier, ditto; 5. La Belle Financier, Mr. Penketh; 6 Gay Stella, ditto.

Flamed Byblœmens...1. Alexander Magnus, Mr. Hardy; 2 Queen of May, Mr. Penketh; 3. Washington, ditto; 4. Laura, Mr. Wilson; 5. Waller's Violet, ditto; 6. Prince of Wirtemberg, ditto.

Bizarre Breeder...Crown Prince, Mr. Penketh.

Byblœmen ditto...Louis XVI., Mr. Wilson.

Rose ditto...Glaphyra, Mr Penketh.

Yellow Self...Min d'Or, Mr. Hardy.

White ditto...White Flag, Mr. Wilson.

Stove Plants...1. Cactus speciosissimus, John Clare, jun., Esq.; 2. Orchidea, unknown, Mr. Dobson; 3. Gesneria Cooperii, ditto; 4. Hoya carnosa, ditto.

Greenhouse Plants...1. Erica ventricosa superba, Mr. Bloor; 2. Salpiglossis, species unknown, John Clare, jun. Esq; 3. Lechenaultia formosa, Miss Hornby; 4. Diosma nudiflora, Mr. Rose.

Geraniums...1. Abranthum, John Clare, jun. Esq.; 2. Fire King, Mr. Dobson; 3. Macranthum, ditto; 4. Seedling, ditto.

Herbaceous Plants...1. Pœonia moutan, Mr. Bloor; 2. Unknown, Mr. Stead; 3. Dodecatheon medium, ditto; 4. Lupinus polyphyllus, ditto.

The Pansies, Fruit, and Vegetables were not named, and are therefore omitted.

THE

FLORIST'S JOURNAL.

SEPTEMBER 1, 1840.

PELARGONIUMS:

THEIR CULTURE, BY MR. GAINES, OF BATTERSEA.

FROM the first introduction of the foreign species, *Geraniums* have always been, and they will continue to be, favourite flowers with cultivators and lovers of plants of every denomination. Their culture is so easy, and they will grow and flower with so little attention, and in situations so confined, that the more common and hardy sorts, which are, notwithstanding, possessed of no inconsiderable beauty, are, in an especial manner, poor men's flowers; for wherever there is room to stand a flower-pot, with free exposure to air and light, and shelter when the weather is severe, there may be a healthy geranium obtained at scarcely any cost, and preserved by a very moderate degree of attention. On the other hand, the attention of a skilful breeder can always keep up geraniums to the first class of conservatory or drawing-room flowers; and he may have them new every season, and in an almost unlimited variety.

This, in great part, arises from the physiology of the plant, and that, again, in no small degree depends upon the character of the country of which it is a native. Now almost all the choicer species and varieties of Geraniums are natives of Southern Africa, where both the drought and the rain, and the violence of change from the one to the other, are in extremes. Where there is this intensity of action in the elements, there is always something

corresponding in the nature, both of the soil and the vegetation. In such places, the rocks are worn to clay and sand by the alternate action of the heat and humidity; and the vegetable refuse of the year is speedily reduced to powder. This, blended with the clay and sand, is spread over the low grounds by the violence of the rains, and forms there the native soil of Geraniums; and hence any cultivator requires only to know this fact, in order to obtain them in the most healthy state, and in the finest bloom. Thus much of the physical geography of the native countries of his plants should be known by every cultivator who wishes to be successful, and especially who wishes to make improvements, as this enables him to form the proper compost, and in so far give the plants the proper treatment, upon established principles; and so preserves him from that empiricism to which the ignorant have recourse, and which has but too often been the bane of the floral art, as well as of every other. In this particular instance, the knowledge of the native ground of Geraniums points out at once that they should be grown in a mixture of loam, decayed vegetable matter, and sand, the last in smallest quantity, because it is the portion of the soil which the winds and the floods are most apt to carry away.

The degree of vegetable life, and the manner of its distribution over the plant are also matters of great importance; and they are in part, at least, indicated by the climate. He who commanded the plants to spring up and adorn the earth, adapted each to its climate with infinite knowledge; and therefore wherever the seasonal action is more than usually violent and variable, the native plants are endowed with superior vital energy, in order to bear up against the action to which they are exposed.

Geraniums, that is, the imported species, are remarkably instinct with life, and there is scarcely a joint in any one shoot not too old for carrying leaves, but may be made to strike fibres as a root. It must not, however, be supposed that plants of this description can be obtained in perfection with less care than any others. The fact is, that they can bear more, and deserve more; and the cultivator should never lose sight of the important truth, that it is not upon the mere life of the plant, as simply keeping it in existence, that he works, but upon the surplus; and if there is no surplus over and above this, then the plant is incapable of improvement, any farther than by placing it in the best soil and

situation; and this is no improvement at all in the florist's sense of the word,—who does not mean a better plant, but a better variety of plant. To give a familiar instance, no man would ever think of improving a Fir tree in the same manner as Geraniums are improved; and the Fir tree is one in which there is no life, that is, no power of continuing life, except in the terminal buds; and therefore Fir trees cannot be multiplied by cuttings. A geranium can be multiplied by itself in this way to an almost unlimited extent; and thus, when a choice variety is once obtained, it may be extended and preserved.

But no new variety can, of course, be obtained by cuttings; yet here again the Geranium offers many advantages. Most of them perfect their seeds in this country; and though the seeds of the same plant are not very prone to break into varieties, which is not desirable in any plant, nothing is more easy than to procure new varieties by cross impregnation. This is deviating from the regular course of nature, and therefore not so certain as the rearing of the same variety; but upon the whole it answers well; and the general rule is to select the female plant for the size and form of the flower, and the male one for the colour which is wished to predominate. The result is never absolutely certain, but generally speaking, good approximations are obtained. This is a curious point, as well as one of great practical value to the florist; for the petals, or sepals as it may be, which are the most highly coloured parts, are in all cases far more intimately connected with the anthers, than with the seed vessel and its appendages; and, generally speaking, they decay, or fall off as soon as the anthers have performed their office. Practical florists are much more deeply interested in this part of the physiology of flowers than they themselves are always aware of, and therefore we shall return to it as opportunity offers.

The cultivated geraniums are still popularly called by the same names as the wild geraniums of our own fields; but the genus had been augmented to such an extent that a sub-division became necessary, and systematic writers changed the genus to a family, under the name of GERANIACEÆ, or the crane's-bill family. This family is divided into three genera, *Geranium*, or the crane's-bill properly so called; *Pelargonium*, or the stork's bill; and *Erodium*, or the heron's-bill. There are natural distinctions in these which, notwithstanding their intimate alliance, would have placed them

in three different orders of the Linnæan arrangement. The geraniums have ten stamens all perfect and fertile; the pelargoniums only seven; and the erodiums only five,—the rest being abortive or obliterated, and the perfect number constant.

All the florists' geraniums are pelargoniums having seven stamened flowers; and, as we already remarked, they have been almost exclusively obtained from Southern Africa. We shall not pause to inquire into their specific differences; but they are so obedient to culture that the varieties are almost innumerable; and a great majority of them are so exceedingly beautiful that, if we leave novelty out of the question, it is not easy to say which deserves the preference. All their colours are fine; and they are so varied that it is difficult to imagine a finer sight than the collection of Mr. Gaines, or any other extensive, skilful, and successful grower, when they are in the prime of their flowering.

This month we have figured two, both we believe seedlings of 1839; and we leave the reader to judge as to which is superior, and conclude this notice by the following notes from Mr. Gaines.

"I put out my cuttings of Pelargoniums in July; and put them into a cold frame well shaded from the sun. When they are rooted I put them in a compost consisting of equal parts of loam and peat earth, mixed with a little silver sand.

"In the last week of September I house my plants, keeping the house at the temperature of about 40°, and giving them all the air that I can during the day.

"In the beginning of February I pot them into larger pots,—say, the smaller plants into twenty-four's, and the larger into sixteen's or twelves. When this is completed I give them a little constant heat to cause them to make fresh fibres. The compost which I use is one half of good rich loam, and the other equal quantities of peat and leaf mould, with about a quart of silver sand to a bushel of the compost. When potting, I stop off all the points of the leading shoots, so that the plants may be kept short and bushy.

N. GAINES."

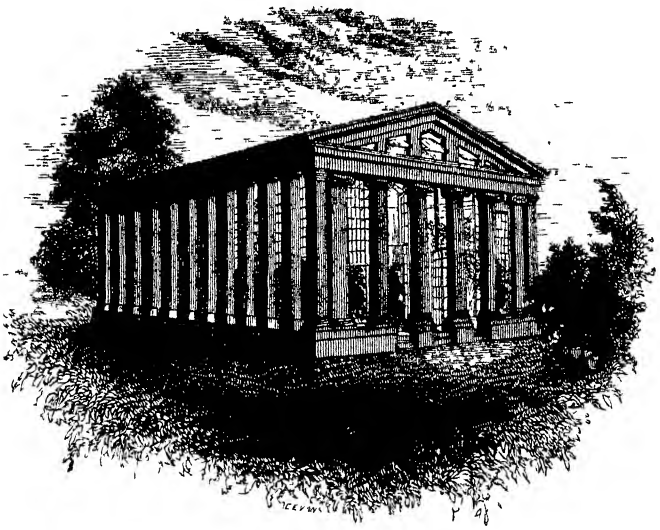
As Mr. Gaines stands high as a grower of these beautiful flowers, whether for the window, the conservatory, or for forcing, his mode of treatment respecting propagation by cuttings may be safely relied upon; and we shall soon have an opportunity of giving an account of cross impregnation, and the breeding of seedlings, either by him or by some other equally qualified.

In treating of the general habits of the pelargonium, as derived from the strong seasonal action of its native land, we omitted to

mention, that it and all other plants which are natives of places where the seasons run into extremes, are peculiarly fitted for forcing; and may, by judicious treatment in that way, be made to flower at any season that may be desired.

VISITS TO NURSERIES. NO. V.

ROYAL GARDENS, KEW.



NEW CONSERVATORY

It affords us much pleasure to know that, notwithstanding the vast number of the more wealthy and influential part of the British population who are at this season careering over land and sea, by the aid of animal power, of wind, and of steam, the numbers who have visited, and are continuing to visit, Kew Gardens, have greatly increased during the present season. For, however stinted these gardens may have been in pecuniary support, they are kept in the finest order. All the plants are healthy; and in the range from the lawns of the pleasure-grounds, through all the gradations to the small stoves which contain the bread-fruits, the nutmegs,

and other gems of tropical botany, there is a scene and a subject for every grade of taste, the visitors, of what class or rank soever they may be, cannot fail in being gratified, and being so, they will return and bring others along with them.

But though this has been one cause of an increase of visitors to the gardens, and as we may presume, a corresponding increase of the love and knowledge of plants, it has not been the only cause, or perhaps the most powerful one. The attention which has been called to these gardens in parliament and by the press, and especially the menace of their very existence as a place of public resort, have attracted the attention, and awakened the sympathy of the people; and these have only to be continued, in order to obtain, and that at no very distant period, that support out of the public revenue which these gardens so justly, and indeed so imperatively demand. Well informed people, especially those who are acquainted with public collections of plants abroad, or with private ones at home, will be startled as well as delighted upon visiting the gardens at Kew. In the arboretum they will find the timber trees of many lands, so ample in growth as would adorn the stateliest forest; and in the green-houses and stoves they will meet with serried ranks of natives of tropical climes, and of the opposite hemisphere, which furnish no bad examples of the groves and thickets of their native climates. In one place may be seen the hard and rugged trees of Australia, not telling the most favourable tale of the general characters of the soil, the climate, and the seasons, of that wide, wild, and peculiar region of the world. In another there is a taste, and but a taste, of the ligneous vegetation of Japan, China, and the Oriental isles; the bland delicacy of which contrasts strongly with the ruggedness of the former. Southern Africa and intertropical America have also their sections, though limited as compared with that of Australia. Nor is this scenic botany—for though there is not positively a scenic arrangement, and such an arrangement cannot well be obtained in an artificial collection, yet one who is fond of plants, and acquainted with the geography of their localities, can conjure up in his own mind the whole scene, by the sight of any one plant which is characteristic of it;—nor is this index to foreign scenes confined to the forest alone, for we have here numerous and beautiful specimens of the characteristic vegetation of the arid waste which is all but desert, and the tropical marsh whose vapours are all but

pestilence. The *Cacteæ*, and their allies, which are plants that are endowed by nature with powers of absorbing moisture by a surface which appears to be proof against all waste by evaporation, even when the rays of a vertical sun are mouldering the rock, and scorching the sand, appear in numerous array. The collection of *Mammillarias* is large and well arranged. To these follow the *Melocacti*, and *Cacti* properly so called; and this part of the collection closes with the *Mesembry anthidæ* and the *Euphorbiæ*. In this section, of which the greater part are seen at one glance, we have the vegetation of some of the most singular surfaces in tropical climates. They grow on the sandy expanses, on the tops of walls and houses, in the crevices of rocks, and in other situations, where nothing analogous to what we call vegetable mould is to be met with. Notwithstanding this, they grow with great vigour according to their habit, and clothe the dry sand or naked rock with an abundant though peculiar vegetation. The forms of all of them are peculiar, though many are allied to our gooseberries in their natural characters, and even in the flavour of their fruit. The flowers of many of them are of exquisite beauty, so that, with all their singularity, they are highly ornamental to those places where they are abundant. They merely adhere to the ground, as the *Epiphytæ* of the tropical forests adhere to the stems of trees; and like these they appear to draw the whole of their nourishment from the atmosphere. Plants which do this are especially worthy of study, as throwing light on the very obscure and indeterminate subject of the food of plants, respecting which a question has often been raised, but never satisfactorily answered.

Very many of those general principles of vegetation, an accurate knowledge of which is essential to the successful cultivation of every species of plant, and especially to the art of obtaining flowers of the best description and in the greatest abundance, may be learned from the study of such a collection as that at Kew. Into the particulars of these we cannot of course enter, but must leave every visitor to find out his own lesson and profit by it. One thing however we may mention with regard to many of the trees of the southern hemisphere, as contrasted with those of the northern. In the latter, the turpentine and other resins and gums are found in the timber of the tree, and they remain there, and, as it were, embalm the timber; so that it lasts long after it is cut down and applied to useful purposes. In some situations, however, those

sides of trees which have a free exposure to the mid-day summer sun, have the timber in a great measure deprived of its resin, which forms an efflorescence on the bark and leaves, or melts into drops, according to circumstances. In the Australian trees, especially the *Eucalypti*, or gum trees, as the colonists term them, the leaves are powdered with an efflorescence of resin; and the gum-resin exudes from the bark in large quantities. The consequence of this is that the timber lasts little longer than till the aqueous sap has dried out of it; and thus it soon decays, even when its substance in the recent state is so compact and heavy as to sink in water. The Norfolk Island pine (*Araucaria excelsa*), and the Moreton Bay pine (*A. Cynninghami*), which are splendid trees, more especially the one first mentioned, have this unfortunate property. By the way, there are in a little glade within the botanic garden very fine specimens of these, standing in contrast with the Chili pine (*A. imbricata*) of the southern Andes. *Excelsa* is an especially graceful tree in its habit of growth, and it grows rapidly, so that one cannot help regretting the perishable nature of its timber.

But while no one of taste and knowledge can help admiring these and many other natives of far distant climes, which are growing luxuriantly at Kew, and many of which have reached a maturity and magnitude unequalled in any other British collection, one cannot help being struck with regret that the more modern importations, those which characterise the present vigour of research and discovery, should be few of every genus, and wanting in many; and this regret is the more bitter that the fault lies wholly in departments over which the director of the gardens has no control. We mentioned in a former paper that the collectors of plants were in the pay and under the control of the admiralty. This of course made the collection of plants at all times a very secondary object; and the economy of more recent times—an economy often more parsimonious than discriminating—has of late years reduced it to nothing; so that while private societies and private individuals have active collectors of plants in many parts of the world, there is not at present a single collector for the national gardens at Kew. Surely this is not as it ought to be. We do not mean that this national establishment should be a rival in sale to the dealers in plants; neither do we mean that it should tend to lessen the reward of their labours by gratuitous distribu-

tion; but still, it is unworthy of the nation to be behind almost every other in this respect. Considering that the purpose is a public one, the sum required to put and keep the establishment on the most respectable footing would be a mere bagatelle—not more than 4000*l.* or 5000*l.* in the year. Many objects which conduce neither to glory nor gain, and the want of which would be no disgrace or loss, cost far more than this, only they are taken up by parties who are in real earnest in their attempts to accomplish them. There is no political or purely self-interested party to advocate the cause of the Kew Gardens; but it is the duty of all lovers of flowers—and who is not?—to keep this subject before the public until it acquires that interest which can carry any point without any opposition. There is nearly a whole vacation to elapse before Parliament shall again assemble; and during that time some plan ought to be organized. We do not presume to say what this plan should be; but we shall let slip no reasonable opportunity of giving publicity to a subject which is of such vital interest to the floral art, and to all who practise it or wish it well.

FLORICULTURAL REMARKS.

New or rare flowers, whether species, varieties, or sub-varieties, are sure to attract notice and command attention. They keep possession of public estimation until they are in everybody's hand; and then, whatever may be their merits as sweet or ornamental objects, they are put aside and neglected. It is their novelty which seems to give them value when first introduced; but as soon as they become familiar to every eye their charm is over.

But it would appear that, in this matter we have not been guided by pure taste: many real beauties have been discarded for the purpose or whim of admitting others of much less merit. Some florists seem to be aware that we have discarded, or rather neglected, many species of plants which, had they received as much attention and culture as has been bestowed on others, would have presented a much finer appearance than they now do.

I am led to make these reflections from seeing the other day a collection of carnation poppies. These annuals have been long inmates of our flower borders; and the seed of the *best* have been

always saved to continue the kind. But the *very best* have not been generally cultivated in the way they may be in order to cause them to present all their variety of tints, and what is much more admirable, the extreme delicacy of their petals, surpassing that of every other flower. So exceedingly delicate, indeed, is the texture of the petals, that the flowers appear more like aerial or gaseous phantoms than substantial vegetable bodies.

In general we endeavour to grow all our flowers as strongly as possible, in order to give amplitude to all their parts. But in the culture of these poppies a contrary course is pursued, in order to raise them in that diminutive size and delicate condition in which they become so truly beautiful objects. When sown in open borders they grow more or less vigorously, according as the soil happens to be more or less rich: but in such situations they are, if thinned out, never very prepossessing either to the sight or scent. But if sown in very poor dry soil and pretty thickly, they are decreased in size and augmented in beauty; and still much more so if sown rather thickly in pots of very light earth, and in which they can be removed out of the sun and wind (which soon tarnish the blossoms), they then, so defended in a greenhouse or in living rooms, are most attractive flowers.

These remarks on such a common tribe of plants, are not addressed to professional or commercial florists, but to the amateur only; who may receive real pleasure from raising such trifles. The large oriental poppies, so interesting for their medicinal and commercial importance, are admitted into the flower garden or shrubbery; where they are at least most flaring objects.

But other plants of but little esteem are now attracting notice after being long almost entirely neglected; and the attention now bestowed upon them is no proof of a vitiated taste in our preference for such common, and by some considered vulgar things. We need not refer to the elevated character of the heart's-ease; but we may mention the well-known French marigold, than which no flower presents a union of richer colours, sometimes so regularly, and at other times or instances so irregularly intermixed. Add to this the endless variety of the flowers individually; and this variegation annually changing. An edging, a bed, or border of those flowers in full bloom, is an amusing study to the most refined mind. No kaleidoscope of the most complicated machinery can possibly show more exactly regular configurations than are

exhibited on the petals of the French marigold: and when its rich colours come to be blended with the self-yellow of its congener the African species, the latter, from its more robust habit, may become a much more desirable ornament. This last idea deserves to be acted on; as a union of the two species is certainly not beyond the bounds of practicability.

A bed of seedling sweet-williams is another interesting feature in a flower-garden; merely from the pleasing exercise it affords of comparing the beauty of one flower with that of another, and selecting the best for transplanting or for future breeders. So beds of seedling carnations, picotees, or pinks, are amusing productions to those who are in pursuit of originating new varieties of these favourite flowers. I have been in the habit of looking at a bed of seedling carnations for these four years past; and I am delighted every season to observe the changes of colour and duplication which takes place from year to year; though no first-rate florist's flower has yet appeared in the assemblage. Notwithstanding this, the blooms are all beautiful, though comparatively of no value except for studying and observing their changes:—no care save weeding has been bestowed.

Ten-week, and Brompton stocks, are not now so much run upon as they were formerly; though sweeter or gayer flowers are scarcely to be found when grown in perfection. These have unaccountably been superseded by German and Russian stocks, which are not to be compared with them either for scent or stately beauty.

Hollyhocks, both the common and Chinese sorts, are principal ornaments of our shrubberies. They are very conspicuous plants, and have maintained a very uniform character for many years. But as some individuals of the Chinese species are better coloured and more double than others, it may be inferred that the whole are susceptible of improvement so as to be changed to what would be more inviting to the eye of a florist.

A bed of Zinnias is another new feature in our flower-gardens, which are only admirable for the various colours and exactly regular forms of the blossoms. They are only half-hardy annuals; but they are well worth cultivation.

The old China Aster, so long cultivated in our gardens, and which, if there be any truth in the opinion that plants may be acclimatized, or naturalized in a colder climate than that of which

they are natives, has been very fairly tried in the case of this plant. But the China Aster remains just as impatient of frost as it was on the first day of its introduction into Europe. As an ornamental plant, however, it has been much improved by the German florists; new colours have been obtained, and these have been so curiously blended with the original self-colour, that they are really very interesting to look at. For the sake of comparison, they are best shown in beds, or in a continuous drill, as a boundary to any compartment of the flower-garden.

Perennial Lupines are also favourite auxiliaries of the flower-garden, especially if he wishes to produce any strongly marked feature in his arrangement. M.

MR. KNIGHT'S EXOTIC NURSERY, KING'S ROAD, CHELSEA.

There are innumerable exotic beauties in the grounds and houses of this establishment, and all arranged in the most admirable order. The liberal style in which the whole is conducted, the numerous and expensive structures erected for the propagation, culture, and preservation of this great and valuable collection, reflects the greatest credit upon the judgment and practical skill of the proprietor.

To name every conspicuous object of the vegetable kingdom which attracts the notice of a visitor to this interesting depôt of exotic plants, would occupy many of our pages; and without noticing what is in the conservatories, greenhouses, orchidaceous, or other stoves, pits, &c. we shall only on the present occasion remark on a most transcendently elegant climber, now, as it has been for several months past, in full bloom, in a propagating stove, namely, the *Ipomœa Learii*, so named by Mr. Knight, which is a plant as yet but little known in European collections, except those which have been sent out by Mr. Knight, the original possessor, who received the seed from his own intelligent collector, Mr. Lear, from the island of Ceylon. The plant in question is planted in a box in one corner of the stove, where it has been about twenty months; and it now covers the trellis under the glass roof, nearly over the whole, or at least two-thirds, of the length of the building—say twenty feet. The branches produce nume-

rous lateral twigs, which bear a succession of gorgeous blue flowers rayed with purple, and to which at present there is no visible limit. From the time it began flowering, the plant has borne consecutively nearly thirty thousand flowers; and whether considered individually or aggregately, they are magnificent objects.

This Ipomœa was discovered in the damp jungles of Ceylon; and it is probable that it will flower in the greatest perfection in a damp shady stove; and for the decoration of columns or trelliage in a conservatory, there cannot be a more appropriate plant.

We well remember, when the *Passiflora alata* and *P. quadrangularis* were first flowered in our stoves in this country, what a sensation was created to see the flowers and possess the plants. These, it is true, are indeed splendid climbers; curious in the form of the flowers, and brilliant in colours. But for the simple elegance of the monopetalous form, the sparkling lustre of the equally ample blossoms, together with their far greater number, the *Ipomœa* will be preferred by every eye of taste.

Mr. Knight has been fortunate in the propagation of this beautiful stranger, and sells the plants at a very moderate price: hence it is probable they will soon be in every collection in the kingdom. It would be an excellent plant for covering the interior of a glazed porch of a stove or conservatory where humid heat enough could be supplied; for as most of the flowers have a dangling position, a greater number are seen at once when the branches are trained to a roof. I.

August 8th, 1840.

MOISTENING PLANTS IN PACKAGES.

On a late visit to Mr. Knight's exotic nursery in the King's Road, Chelsea, we saw a bottle-shaped vessel, invented by Mr. Knight himself, for keeping the roots of plants in a moderately moist state while packed up for transportation.

It is often found that, on the arrival of a package of plants from a distant quarter,—and however carefully packed at first among damp straw or moss,—many of them, if not quite dead, are much damaged by reason of their getting too dry during the

passage, whether by sea or land. In all such instances it is quite evident that if the moisture had not been exhaled, the plants would have arrived in better order.

It therefore occurred to Mr. Knight, that if a *slowly-leaking* water vessel could be packed up in the centre of the box or bundle, as much water might be made to ooze away from it as would keep the whole in a uniform and sufficient state of humidity. But it also occurred that, if the vessel were formed of any kind of metal and perforated, the holes for the escape of the water could not be made small enough to permit an equable discharge; in which case the flow would be too much at first, and none at all at last.

Mr. K. next thought of having a vessel made of some porous kind of earth, which when burnt, would remain of so open a texture as to allow the gradual escape of the water in whatever situation it may be placed. The potter employed has been very successful, and has sent a sample of such ware; which Mr. K. means to use and recommend to his foreign correspondents, as the easiest means of keeping the roots of plants partially moist while in transitu. M. N.

ON THE RANUNCULUS.

Continued from p. 112.

THE roots being planted and covered, as directed in last month's number, they require no further attention till they appear above the mulching; when the number sticks should be placed, as before directed, which may be easily accomplished with the assistance of the book. As the plants advance in growth, should the season prove dry, water must be given plentifully, observing this difference,—the Scotch varieties may be watered over the foliage, without sustaining any injury; but with the Dutch the contrary must be pursued, for if the leaves of the Dutch are wetted they frequently turn brown, and the plant goes off, but if watered between the rows, it is of the greatest benefit; in short it is absolutely necessary in dry weather: the evening is the best time.

If intended for exhibition, some care is necessary in shading; the best kinds may be covered with small tin conical shades fixed on an upright stick, or, what is far better, the whole bed covered

with an awning. This is little more expense than tin shades, and affords a far greater facility of viewing the flowers as they stand, besides the additional benefit conferred on the plants by keeping the whole bed constantly shaded; in fact, an awning is now considered as necessary where florists' flowers are grown as a spade or rake. Nor can I conceive a greater treat to an admirer of floriculture, than a visit to a ranunculus bed judiciously arranged, and so shaded. As soon as the bloom begins to decay the plants must be narrowly watched, and the first symptoms of decreasing energy taken advantage of, for if left only a week beyond the proper time they begin growing again, and frequently spoil. This is the most particular thing to be observed in the whole course of cultivation; the proper time is immediately the foliage will pull off without lifting the root. It will often be found necessary to take up one sort and leave the next to it, so quickly do they recommence growing: the Dutch are usually dry first.

When taken up, a little of the earth should be rubbed off so as not to break the points of the tubers; the roots should be laid on shelves in a shed or some shaded place, for a fortnight or so; then choose a bright sunny day to finish them off. To do this, spread them upon a mat in the sun for an hour or two; this will render them firm and easy to clean, which done, they may be either returned to the shelves or put into bags till the planting season arrives. They will require to be looked over now and then; and if they have any appearance of mildew about them, bring them out into the sun again or into a warm room till they are thoroughly dry.

This then is all that is required to perfect one of the most beautiful of Nature's productions. Before concluding I will venture a word on raising the ranunculus from seed: that which I believe to be the best method is to raise them on a very slight hot-bed, about two feet deep. In the latter end of February place a shallow one-light box, fill it up to within four inches of the top with very light rich earth; sow the seed pretty thick without covering it; place the light on, and keep it constantly shaded with a double mat till the plants appear, then sprinkle a little fine earth over them; repeat this as the plants grow, and as they get strength, inure them by degrees to the weather till they are able to stand without any protection; when taken up they must be dried very gradually, or they will shrivel. R. P.

THE ORCHIDACEÆ, AND THEIR CULTURE.

[We have great pleasure in announcing to the readers of the "Florist's Journal," that through the kindness of Messrs. Rolisson of Tooting, the excellence of whose collection, and the skill of whose management are so well known, we have insured the assistance of Mr. Don, brother to the Professor of Botany in King's College, in furnishing our readers from time to time with authentic accounts of the management of the Orchidaceæ, and other choice plants of tropical climates; and we trust that with such a cooperator, having so splendid a collection under his immediate care, we shall be enabled to make our Journal without a rival in this department.] Editor.

Sir—I do not intend to give, in this paper, any particulars respecting the cultivation of *Orchideæ*, as I purpose to furnish in succession a paper on each of the leading genera. My present object, therefore, is merely to draw the attention of your readers to this highly interesting tribe of plants, by a few remarks on their general habits and management.

Generally speaking, all the Epiphytal Orchideæ are natives of tropical climates; and they are found inhabiting trees on the outskirts of the woods, but more rarely in the depths of the forests. Some indeed inhabit rocks exposed to the sun; as for instance, some species of *Brasavola* and *Dendrobium*, and even some species of *Cattleya*, are to be met with inhabiting the rocks on the coasts of Brazil. But, in whatever situations they are found native, all the tropical ones inhabit places which have the seasons strongly marked, by humidity at one time and drought at another, with a high temperature during both.

Therefore, those who wish to cultivate this tribe of plants to the greatest perfection, must be in possession of two stoves, the one hot and moist, to answer to that native season in which the plants have the greater part of their growth; and the other hot and dry, to answer to the season of their repose. Unless the grower has thus much of accommodation he cannot, with the exception perhaps of a few of the less important species, grow these plants in such perfection as they deserve to be grown; because

the humid and the dry seasons cannot be combined in a single stove; and to make that stove alternately moist and dry would limit the cultivation to such species only as come into flower at nearly the same time.

It is to be understood that the warm and dry stove is the place of rest for the plants; and they should be removed into this as soon as they have matured their pseudo-bulbs, which are the offsets or succession plants. This treatment must not however be general; because, though some species take their repose as soon as the pseudo-bulbs are perfected, other species show flower immediately upon this; and such as do so, do not of course subside into their annual repose until the flowering is over. Therefore they should be kept in the warm and moist house until the flowers are about to open, and then removed into the dry and warm one; by which the size of flower occasioned by the moisture will be retained, and the colours will be more brilliant, the scent finer, and the flowers more durable, than if they were allowed to remain in the moist stove during the whole time of flowering. After the flowering is over, they should remain in the warm and dry stove until they again show signs of growth; and when they do this they should be removed to the hot and moist one. By this means the plants will be worked as nearly according to nature as can be done by artificial means; and consequently they will be more healthy and vigorous in their growth, and far superior in their flowering, to what they would be were they attempted to be forced unnaturally.

Their periods of growth are very different, and thus they require attendance, and shifting from the one stove to the other throughout a good many months. Some begin to grow in March, and others in all the months from March to September inclusive, and a few are later even than that. The times which they require in completing the growth of their pseudo-bulbs, are also very different. Some do it in six weeks, some require six months, and others periods intermediate between these; and thus a good collection requires many periodical treatments for the different species, though the two stoves, one dry and the other moist, are sufficient for them all. These, as has been said, give the two grand characteristic seasons of the plant; and the time of the season for each species must be discovered by actual observation.

Such species as do not begin to show flower immediately after

they perfect their bulbs, should be left in the dry stove until signs of flowering appear, and upon this they should be taken to the moist one until the flowers are just about to blow. From this it will be observed that there is a difference of seasonal habit in them; some species forming their bulbs and displaying their flowers by one continuous growth, as it were; and others taking repose after the one effort, before they have vigour enough for the other. This is closely connected with the occurrence of the rains in their native regions. If there is only one rainy season during the year, that gives the stimulus to both efforts; but if there are two, the habit is to bulb in the one and flower in the other. We shall, however, take a future occasion to examine this point, which is common to the physiology of many plants in countries where the rainy and dry seasons are strongly marked.

In all cases, however, the plants should be taken to the moist house whenever they begin to show signs of flowering, and kept there until the flowers are ready to expand, because the flowers will enlarge more rapidly, and attain far greater size and finer proportions, than if they were to be flowered in a dry house.

By having an abundant collection, and following this mode of treatment, with perfect knowledge of the habits of each species, the Epiphyte house might, I feel confident, be made as gay as the Tulip bed; and indeed far superior to it, from the endless variety of forms, and the sweetness of perfume, in addition to colours not surpassed in the whole floral kingdom, in the brilliance of their tones, and the gracefulness of their arrangements.

By means of the two houses, persons whose constitutions were unable to bear the hot air and vapour of the moist house, would have the pleasure of enjoying successively the full beauties of their collection in the dry house, because the heat there never requires to be so great as in the moist house.

Those who receive importations of Orchideæ late in the season, should not attempt to put them immediately in the moist house in order to force their growth, as a number of fine plants have been lost by such attempts to force them before their proper seasons. They should be put into the dry house till they begin to show buds; and then they are not merely safe, but certain of coming to maturity in the moist one. The proper season for giving Orchideæ their annual repose in this country is during winter; and, though there are some few exceptions, the proper growing

season extends from May to October inclusive; so that the beauty of these plants may be quite naturally extended over six months in the year, by having the species well selected; and this is an advantage which comparatively few flowers possess. During the growing season, the heat of the moist stove should range from 70° to 100° of the common thermometer, and the supply of humidity should be copious. The best way of admitting air is through the loppings of the glass all over the house; because when this is done, it comes regularly, and none of the plants are chilled, which would be the case were the air to enter in volume at any part of the house. D.

Rolisson and Sons' Nursery, Tooting,
August 24th, 1840.

THE WEATHER FOR AUGUST.

During this month the general temperature, at least during the day, has been comparatively high; but still the month has partaken a good deal of that anomalous character which marked the previous part of this season. The last days of July, and the first two weeks of August were very hot, the heat having been ushered in by some light showers of more kindly description than any which occurred in the early part of the season. Still, however, the heat and drought acting upon those sprinklings of rain, formed a sort of pellicle upon the surface of the ground, calculated to retard the passage both of heat and humidity. The consequence was, that all plants with very fibrous roots languished; and the fleshy and bulbous rooted ones did not wear the same kindly appearance as in ordinary seasons. Even when the water produced by those light showers was stagnant upon the surface, and tending to blight every thing around it by the rapidity of its evaporation, the soil at the depth of only a few inches remained in a state of dry powder, while further down the moisture with which it had been soaked by the long-continued rains of the preceding year remained unaffected by the solar action. The consequence of this was, chilness in the evenings, arising from the strong evaporation during the day; and as this chilness was generally accompanied by wind, there was no nocturnal precipitation of water to refresh the leaves.

In the second week of August, there were strong winds, approaching to tempests, and accompanied by heavy falls of rain, or of hail, partial in their extent, and rather brief in their duration, but still calculated to injure not only the blooms and more delicate parts of vegetation, but even the leaves of the forest trees. The morning of the 11th and the 15th and 17th days of the month were those in which these storms were most conspicuous in the vicinity of London; but the times, and also the effects produced, were, of course, different in different places. It generally happens that if there is violent weather in any part of the South of England, Kent comes in for a full share; because the chalky soil on the downs there is soon heated, and as soon cooled; or rather,

the air over the surface is strongly heated by reflection while it remains tranquil; but the heat is not communicated to the ground, and the consequence is, that where the wind blows with any considerable velocity, there it always blows cold, and brings snow or hail, according to the season. The hail showers which fell there toward the middle of the month were highly injurious to the more delicate vegetation, especially to the hops.

The general effects were indeed injurious to all kinds of exposed vegetables, from the loftiest forest tree to the most lowly flowering plant. The brief but violent storms told upon the forest trees, in an untimely fall of the leaf; for in many places the ground was as thickly strewed with leaves as it is in the October of favourable years. This cannot fail in having pernicious effects upon the ripening of the wood, and consequently upon the growth of the next year. Where dahlias were exposed, or not properly secured, the havoc made among them was very great; and in many places they can hardly be expected to recover; and even where the plants have not been broken, the flowering is ragged. In the more lowly stemmed flowers, the effects of the peculiarity of the season have been still more obvious. The transitions from intense drought to these heavy hurricane showers, and from the showers back again to drought, have been much too rapid; and the consequence is that, unless in very peculiarly sheltered spots, none of the annuals have flowered well, and some of them not at all. The asters have in general been complete failures, few blooms appearing; and those few not of half the ordinary size.

Toward the close of the month, the weather, though often oppressively hot during the day, has been upon the whole more kindly, but still there is a deficiency of moisture in that part of the soil which fibrous roots are able to reach; and the consequence is that the borders make a poor appearance, compared with what is usual at the same time of the year. A month however is so short a period that little conclusion can be drawn from it, though the whole of the present season, taken in succession from the preparation for one year's growth, to the preparation for the next, is a subject which, when the time comes, will be found well worthy of consideration.

CALENDAR FOR SEPTEMBER.

Stove.—Where any repairs are yet required to be done, let them be set about with all possible dispatch, both here and all other glass. Begin to repot all plants that require it, so as to have them done by the end of the month. In repotting plants at this season, the roots of large ones should be reduced as much as possible, or they will become unmanageable. Prune back all free growing plants, climbers, &c. If the weather is warm, continue to give a plentiful supply of air in the day.

Finish drying Cape roots, &c.

Greenhouse—The same directions as for the Stove must be observed here. Repot Geraniums; cut them down to within two or three joints of the bottom. Cut back and tie up all climbers. Tender annuals' seeds require constant attention now. Let the houses and plants be thoroughly cleaned, and use the knife freely; for if these things are not done now, it is impossible to do them in the winter. Tropeolum bulbs may now be taken up, or the roots kept in the

pots in some dry situation, secure from frost. Dry off Gloxinias. Repot Cacti; for these the earth should not be quite so rich as for summer growth.

FLOWER GARDEN.

Dry off Dahlias in pots; keep the others neatly tied; they should now have three or four stakes, so as to open them to the sun and air. Take up the layers of Picotees, pot them in small forty-eight sized pots, put two plants in each; let the earth be of an open texture; two-thirds roads crapings, and one-third good friable loam is a very good mixture. Plant out pipings of Pinks, &c. Keep the Auriculas from wet and sun; they must be watered gently about twice or three times a week. Begin now to prepare your ground for tulips. Hyacinths and Forcing Bulbs in general must now be potted and plunged out of doors. Keep the walks and lawns constantly rolled. Cuttings of Pansies which are struck must now be potted for the winter.

Sow seed of all biennials towards the end of the month. Chrysanthemums may be brought in doors to perfect their bloom. Cuttings of any desirable kind of plant may yet be taken; they require more heat now than last month.

FLORAL INTELLIGENCE.

July 24. VALE OF EVESHAM HORTICULTURAL AND FLORAL SOCIETY. Prizes awarded:—

Carnations, Scarlet Bizarres...1. Willmer's Conquering Hero, Mr. Holmes; 2. Hepworth's Leader, ditto; 3. Duke of Devonshire, ditto.

Ditto, Crimson Bizarres...1. Holmes's Count Palini, Mr. Holmes; 2. Gregory's King Alfred, W. Barnes, Esq.; 3. Seedling, Mr. Holmes.

Ditto, Scarlet Flakes...1. Holmes's Lady Lennox, Mr. Holmes; 2. Greasly's Mary Ann, ditto; 3. Taylor's Festival, W. Barnes, Esq.

Ditto, Rose Flakes...1. Leach's Conquering Hero, Mr. Holmes; 2. Seedling, ditto; 3. Ely's Lovely Ann, ditto.

Ditto, Purple Flakes...1. Medcalf's Village Maid, W. Barnes, Esq.; 2. Seedling, ditto; 3. Martin's Miss Wake, Mr. Homes.

Red Picotees...1. Holmes's Mary, W. Barnes, Esq.; 2. Seedling, ditto; 3. Woodhead's Miss Bacon, Mr. Holmes.

Purple Picotees...1. Martin's Princess Victoria, Mons. Edouard; 2. Unknown, ditto; 3. Ditto, ditto.

Pansies, 12 varieties...Rev. J. Harling.

Dahlias...1. Cox's General Washington, Sir C. Throckmorton; 2. Seedling, ditto; 3. Seedling, ditto; 4. Lewisham Rival, ditto; 5. Sussex Rival, W. Barnes, Esq.; 6. Rienzi, Sir C. Throckmorton.

Stove or Greenhouse Plants...1. Clerodendron fragrans, Mrs. O. Cheek; 2. Nerium splendens, R. Blayney, Esq.; 3. Anonis natrix, E. Rudge, Esq.

Hardy Annuals...Rev. J. Harling.

Cockscombs...Mrs. Ashwin.

Perennials...1. Rev. J. Harling; 2. Rev. J. Marshall.

EXTRA PRIZES.

Collection of Cactuses, E. Rudge, Esq.; Peaches, Mr. H. Gibbs; Melons, J. Ashwin, Esq., Scarlet Runners, Mr. J. Hall; Peas, Mrs. Shute; Potatoes, Mr. J. Hall; Shalots, ditto.

DONCASTER HORTICULTURAL SOCIETY. Prizes awarded.

Best Orchideous Plant...1. Mr. R. Hall, Oncidium Harrisonii; 2. Messrs. Crowder, Calanthe veratrifolia.

Stove Plant...1. Messrs. Crowder, Musa coccinea; 2. Mr. R. Hall, Euphorbia splendens; 3. Messrs. Crowder, Gloxinia candida.

Greenhouse Plant...1. Mrs. Elmsall, Ruellia ciliata; 2. Mr. R. Hall, Pimelia Decussata; 3. Mr. Robinson, Pimelia hispida.

Cactus...1. Mr. Robinson; 2. Messrs. Crowder, Hybridia; 3. Dr. Bower (W. Bark, gardener), Speciosissima; 4. Messrs. Crowder, Seedling,

Exotic Climber...1. Messrs. Crowder, Thunbergia aurantiaca; 2. Ditto, Ipomœa insignis.
Pan of 12 Pelargoniums...1. Mrs. Milan, Louis Quatorze, Gem, Lowndes's Perfection, Climax, Alexandrina, Beauty of Cambridge, Vandyke, Esmeralda, Jewess, King, Foster's Rosea, Chef-d'Œuvre; 2. Messrs. Crowder; Lilac ditto, Mr. R. Hall, Seedling; Blush ditto, Mr. Robinson, Garth's Perfection; Rose ditto, Mr. Robinson, Priam; Pencilled ditto, Mr. Robinson, Speculum mundi; Red ditto, Mr. Robinson, Lilia; Pink ditto, Mr. Robinson, Vivid; Scarlet ditto, Mr. Robinson, Concessum; Crimson ditto, Mr. Robinson, King; Purple ditto, William Chadwick, Esq., Beauty of Ware; White ditto, Mr. Robinson, Alexandrina.
Erica...1. Mr. R. Hall, Prægnens; 2. Wm. Chadwick, Esq. Ampullacia; 3. Messrs. Crowder, Celorate.
Indigenous ditto...Messrs. Crowder, Cerneria alba.
Herbaceous Peony...1. Messrs. Crowder, Albaflora humeii; 2. Ditto Albaflora fragrans; 3. Mr. Robinson.
Fuchsia...1. Mr. R. Hall, Atrorubens; 2. Mrs. Milan, Richardsonia; 3. Mr. R. Hall, Standishii; 4. Mr. Robinson, Fulgens.
Mimulus...Mr. J. Foulston, Seedling.
Hardy Creeper...Messrs. Crowder, Clematis Sieboldii.
Hardy Shrub...1. Messrs. Crowder, Hydrangea quercifolia; 2. Mr. R. Hall.
Hardy Herbaceous Plant...Messrs. Crowder, Delphinium Barlowii.
Best Herbaceous Calceoloria...Mr. Robinson.
Shrubby ditto...1. Ditto, Seedling; 2. Ditto, ditto; 3. Mrs. Milan.
Pan of 50 Pansies...Mr. Rowcroft.
Ditto of 12...1. Mr. Thorpe; 2. Ditto.
Ditto of 6...1. Ditto; 2. Mr. Keyworth.
British Plant...Messrs. Crowder, Pyrola minor.
Collection of ditto...Mr. Stone.
Tender Bouquet...Ditto.
Hardy ditto...Mrs. Webster, of Sprotbro.
Tender or Hardy ditto...Mr. Stone.
Annual...Rev. H. Branson, Rhodanthe Manglesii.
White Stock...T. Dyson, Esq. (Richard Brooks, gardener).
Scarlet ditto...Mrs. Elmsall (J. Blyton, gardener).
Red Wallflower...William Sheardown, jun. Esq.
Double Dahlia...1. Lady Cooke (H. Seaton, gardener), Don John; 2. Ditto; 3. Ditto, Lilac Perfection; 3. Dr. Bower, Robert le Diable.

ROSES.

Best 25 Roses...Not named.
Ditto 12 China and Noisette...Messrs. Crowder, China and Sanguina, Cinensis and Fragrance, Noisette elegans, Madame d'Arblay, Alice Grey, Sir Walter Scott, Spectabilis, Russelliana, Zillemburge, Amie Vibert, and Blush.
12 Garden ditto...Mr. R. Hall, Pearsonii, Coupe d'Amour, General Lamarque, Ranoncule ponctue, Luxembourg Moss, Village Maid, Duke of Devonshire, Lurid, Hybrid Statdholder, Crimson perpetual, Ruga, Viola Petit.
6 Ditto...1. Mr. R. Hall; 2. Mr. Robinson.
China...1. Mr. R. Hall, Russelliana; 2. Dr. Bower, Splendissima.
Dark Purple...1. Miss Chivers (C. Ross, gardener), Bishop rose; 2. Mr. Robinson.
Lilac...1. Miss Chivers; 2. Mrs. Elmsall.
Blue...1. Mrs. Elmsall, Grand marbled; 2. Ditto.
Striped...1. Mr. Robinson; 2. Mrs. Milan, Village Maid.
Crimson...1. Mr. Robinson; 2. Lady Cooke, Dodd's Mary.
Pink or Blush...1. Dr. Bower, Provence; 2. Mr. J. Foulston.
White...1. Miss Chivers; 2. J. F. Woodyeare, Esq. (G. Gleadall, gardener), Madam Hardy.
Scarlet...1. Mr. Stone, Malton; 2. Dr. Bower.
Shaded...1. Dr. Bower, Sultan; 2. Ditto.
Spotted...1. Mrs. Elmsall; 2. Mr. R. Hall, Duke of Devonshire.
Moss...1. Mrs. Elmsall; 2. Ditto; 3. J. F. Woodyeare, Esq.; 4. Mrs. Milan; 5. Mr. Robinson; 6. Mrs. Milan
Pinks, Ranunculuses, Fruit, and Vegetables...Not named.

EXTRA PRIZES.

Orchideous Plant...Mr. R. Hall, Oncidium papilio.
Greenhouse Plant...Messrs. Crowder, Lilium japonicum.
Pale Pelargoniums...Mr. Robinson, Lady of the Lake.
Large Crimson ditto...Ditto, Alarm.

July 28. HUNTINGDONSHIRE HORTICULTURAL SOCIETY. Prises awarded.

CARNATIONS.

Bizarre Scarlet...1. Mr. Twitchett, of Cambridge, for Twitchett's Don John; 2. Mr. Wood, Huntingdon, Wood's Corsair; 3. Mr. Twitchett, Don John; 4. Mr. F. Barringer, Bedford,

Ditto Purple...1. Mr. F. Barringer, Barringer's Surprise; 2. Ditto, Paul Pry; 3. Ditto, Gregory's Alfred; 4. Mr. Giddings, Hemingford, ditto.

Flake Scarlet...1. Rev. — Newby, Tilbrook, Lydia; 2. Mr. F. Barringer, ditto; 3. Ditto, Wilson's William IV.; 4. W. Hogg, Esq. Biggleswade, Lydia.

Ditto Purple...1. R. Headley, Esq. Stapleford, Headley's Empress of Purples; 2. Mr. F. Barringer, Queen of Sheba; 3. Mr. Franklin, St. Neot's, ditto; 4. R. Headley, Esq. Dives.

Ditto Rose...1. Mr. F. Barringer, not named; 2. Mr. J. Barringer, St. Neot's, Sir George Crewe; 3. Mr. Hogg, ditto; 4. Mr. F. Barringer, Eli's Lovely Anne.

Best in any Colour...Mr. Twitchett, Twitchett's Don John.

Best Seedling in any Colour...1. by Mrs. Wood, Mr. Twitchett, Twitchett's Don John; 2. by the Society, Mr. F. Barringer, Barringer's Enchantress; 3. ditto, Mr. Wood, Wood's Corsair.

Beating all the named Flowers in each Class...Mr. Twitchett, Don John.

PICOTEES.

Purple...1. Mr. Giddings, Miss Hennell; 2. Mr. J. Barringer, ditto; 3. Rev. — Newby, ditto; 4. Mr. F. Barringer, ditto.

Red, dark...1. Mr. F. Barringer, Sharpe's Duke of Wellington; 2, 3, and 4, Mr. Wood, Lord Byron.

Scarlet, or pale Red...1. Rev. — Newby, Russell's Incomparable; 2. Mr. Wood, Wood's Victoria; 3. Mr. Franklin, ditto; 4. Mr. Giddings, not named.

Rose...1. R. Headley, Esq. Green's Victoria; 2. Rev. — Newby, Sharpe's Comet; 3. Mr. Giddings, not named; 4. Ditto, ditto.

Yellow...1. Mr. Franklin, Maid of Magdeburgh; 2. Rev. — Newby, Martin's Queen Victoria; 3 and 4. Mr. Wood, Wood's Childe Harold.

Best in any Colour...Mr. F. Barringer, Sharpe's Duke of Wellington.

Best Seedling in any Colour...1. by Mrs. Wood, Mr. Giddings, not named; 2. by the Society, Mr. Wood, Wood's Manfred; 3. ditto, Mr. Giddings, not named.

Beating all the named Flowers in each Class...Not claimed.

Three best Double Dahlias...1. Mr. Beaufort, not named; 2. Mr. Douglas, ditto; 3. Mr. Webster, Sandy Place, Bedfordshire, Suffolk Hero, Bedford Rival, Colonel Buckworth (seedling); 4. Mr. Beaufort.

Best Cockscomb in pot, by Mr. Wood...Mr. Walker, of Upwood.

Best Collection of Hollyhocks...1. Mr. Wood; 2. Mr. Douglas.

Best Collection of Plants in pots, consisting of not less than 20...1. David Veasey, Esq. of Huntingdon; 2. Mr. Wood.

July 30. WINGHAM HORTICULTURAL AND FLORAL SOCIETY.

Best 3 Geraniums...1. The Rev. J. G. Hodgson, Ariel, Lord Auckland, Joan of Arc; 2. Not named.

Best 3 Balsams...Denne Denne, Esq.

Best 3 Cockscombs...Ditto.

Best 3 Perennials (varieties)...Mr. Keeler, Pentstemon gentianoides, Pentstemon arguta, Ænothera ventricosa.

Best 3 Annuals (ditto)...Mr. Sankey, Phlox Drummondii, White Thunbergia, Salpiglossis picta.

Best Climbing Plant...Ditto, Lophospermum erubescens.

Best 3 Fuchsias...Ditto, Fulgens, dark variety, Fulgens, light variety, Globosa.

Second best ditto...Mr. F. Laslett, Majestica, Stylosa conspicua, Pendula terminalis.

Best Fuchsia...Lady Bridges, Fulgens.

Best 3 Greenhouse Plants...1. J. Godfrey, Esq., Bœckia virgata, Aplexis Sesamoides, Clethra arborea; 2. Mr. Sankey, Erythrina crista Gallii, Salvia patens, Bœckia virgata.

Best Bouquet of Roses (varieties)...J. Godfrey, Esq.; 2. Mr. H. Branford.

Best 6 Dahlias...1. The Rev. C. Oxenden, Springfield Rival, De Vere, Don John, Lady Dartmouth, Headley's Perfection, Helena; 2. Mr. Jullion, Marquis Northampton, Ansell's Unique, Seedling, Dodd's Wellington, Springfield Rival, Contendor.

Best 6 Carnations...The Rev. J. G. Hodgson, Headley's William Cobbett, Young's Earl Grey, Jacques's Iris, Leighton's Bellerophon, Hogg's Lady Domville, Wilson's William the Fourth.

Best 6 Picotees...Ditto, Miss Campbell, Queen Adelaide, Hogg's Abelard, Charles the Tenth, and 2 Seedlings.

Best 12 Heartsease...1. The Rev. J. Dix, Grand Duke, Seedling, Hope, Diomede, Pilot, Nimrod, Grace, Purpurea elegans, Acteon, Celestial, Pomona superb, Purpurea grandiflora; 2. The Rev. J. Dix, Grand Duke, Grand Monarch, Miss Rosa, Grace, Celestial, Glory of Enfield, Diomede, Lord Durham, Shakespeare, Seedling, Constance, Purpurea grandiflora.

Best 12 German Stocks...1. Mr. Sankey; 2. J. P. Plumptre, Esq., M.P.

Best 12 Perennials...The Rev. C. Bayley, Phlox reflexa, Double White Campanula, Phlox paniculata purpurea, Stenactis speciosa, Mimulus Cardinalis, Pentstemon speciosum, Potentilla Hopwoodiana, Eschscholtzia Californica, Verbena melindris latifolia, Coreopsis latifolia, Geranium Lancastrianum, Betonica stricta.

Best 12 Annuals...Mr. Sankey, Collinsia bicolor, Schizopetalon Walkerii, Lobelia gracilis, Phlox Drummondii, Gilia tricolor, Clarkia pulchella alba, Clarkia elegans, Lupinus Cruikshankii, Clarkia pulchella, Goodetia rubicunda, Clarkia elegans rosea, Bartonia aurea.

Best Bouquet of Forced Flowers...Mr. Sankey.

Best ditto of Hardy Flowers...R. Brooke, Esq.

August 3. BIRMINGHAM ANNUAL GOOSEBERRY AND FLOWER SHOW. Flower Prizes awarded:—

CARNATIONS.

Premier Prize...Rob Roy, Mr. Fletcher.

Scarlet Bizarres...1. Game Boy, Mr. Job Pullen; 2. Duke of Devonshire, ditto; 3. William the Fourth, Mr. Fletcher; 4. Kinfare Hero, ditto.

Scarlet Flakes...8. Booth's Conquest, Mr. Fletcher; 2. Addenbrooke's Lydia, ditto; 3. Festival, ditto; 4. Madame Marie, Mr. Job Pullen.

Crimson Bizarres...1. Lucretia, Mr. Job Pullen; 2. Lord Eldon, ditto; 3. Rainbow, Mr. Britten; 4. Wakefield's Paul Pry, ditto.

Purple Flakes...1. Elliott's British Queen, Mr. Flindell; 2. Lady Hewley, Mr. Fletcher; 3. 'Squire Clarke, ditto; 4. Turner's Princess Charlotte, Mr. Abraham Pullen.

Pink Flakes...1. Duchess of Gloucester, Mr. Job Pullen; 2. Queen of England, ditto; 3. Lady Grey, Mr. Fletcher; 4. Plant's Lady Hood, Mr. Flindell.

PICOTEES.

Premier Prize...Pullen's Incomparable, Mr. Flindell.

Purple-edged...1. Seedling, Mr. Fletcher; 2. Pullen's Incomparable, Mr. Britten; 3. Pullen's Lady Peel, Mr. Flindell; 4. Amelia, Mr. Fletcher.

Red-edged...1. Seedling, Mr. Britten; 2. Ruby, Mr. Abraham Pullen; 3. Fair Flora, Mr. Job Pullen; 4. Prince George, Mr. Fletcher.

DAHLIAS.

Premier Prize...Seedling, Mr. Coudrey.

1. Springfield Rival, Mr. Coudrey; 2. Topaz, Mr. Job Pullen; 3. Marquis of Lothian, Mr. J. Rodway; 4. Rival Sussex, Mr. Coudrey; 5. Mungo Park, Mr. Beach; 6. Sir Henry Fletcher, Mr. Beach; 7. Purple Globe, Mr. J. Rodway.

August 4. HORTICULTURAL SOCIETY OF LONDON.

The greatest novelty shown was a new species of Cobea; this genus has been hitherto seen in only one species, the Cobea scandens, a well-known and very pretty climber; the species exhibited on the present occasion is a native of Mexico, with flowers of a pale yellow, also a climber, and called C. Stipularis. A very beautiful specimen of Miltonia spectabilis, perhaps one of the very best species of Orchidaceæ, was shown by Mr. W. Dean, gardener to S. Rucker, Esq., F.H.S.

Mrs. Lawrence had a collection, containing a very fine specimen of Peristeria elata, which has received the name of the Holy Ghost plant, from the distinct resemblance to a dove presented by the internal part of the flower: the plant shown had several spikes of bloom five to six feet high: Peristeria maculata, Maxillaria Rollisoni, two plants of a new variety of Gongora; two equally fine specimens of Oncidium Lanceanum, Acropera Loddigesii, Zygopetalum maxillare, Bifrenaria atropurpurea, Mahernia pinnata, Ixora coccinea, Clerodendron paniculatum, and Melastoma malobathrium; also single specimens of Statice foliosa, and Silene laciniata.

Mr. Redding, gardener to Mrs. Marryatt, brought a collection of noble specimens of Russellia juncea, Gongora sp., Oncidium luridum, Epipactus palustris, Pelargonium tricolor, Crinum spectabile, and Tristanea nerifolia.

Mr. Pamplin, Hornsey-road, a collection of Heaths, consisting of the following varieties, Inflata, Inflata alba, Jasminiflora, Eximia, Bandona, Ampullacea, Swainsonia, Ovata, Ampullacea vittata, Clusiana, and one or two seedlings, the whole of them well grown and blooming freely.

Mr. Pratt, gardener to W. Harrison, Esq. Cheshunt, exhibited a fine plant of Erica Eweriana, about six feet high; also Pimelea hispida, Gesneria splendens, and Erica ampullacea.

Mr. Dean, gardener to J. Bateman, Esq., had blooms of Stanhopea Wardi, Acropera Loddigessii, and some other orchidea.

Mr. Young, nurseryman, Epsom, exhibited a new and handsome species of Gloxinia, with bright red flowers.

Messrs. Colley and Hill, Hammersmith, two new Pelargoniums, called Cleopatra and Ajax.

From the Society's garden were Trichopilia tortilis, Galeandra Baueri, Silene lacineata, Gasteria conspurcata, Chironia frutescens, Portulaca Thellusonii, and some others.

Mr. Gundry, gardener to S. Painter, Esq., of Richmond, exhibited four Queen Pineapples.

Mr. Moffatt, gardener to the Duke of Newcastle, a collection of grapes, containing Black Frontignac, Alicant, Black Hambro', &c.

Mr. Chapman, of Vauxhall, a dish of Dutch sweet water grapes.

The Hon. and Rev. W. Herbert, F.H.S., Erica ampullaceoides, and Loasa Portlandica, a species nearly allied to L. lateritia, but said to be more hardy, having lived through the winter in the conservatory while the latter perished by its side.

Capt. Neville, of Jersey, sent a Pelargonium, which he considers a decidedly new species; it is, however, very inferior to most of the older sorts.

Prizes awarded...The large silver medal to Mrs. Lawrence, for her collection. Knightian medals to Mr. Pamplin, for Heaths; to Mr. Young, for Gloxinia n. sp., and to Mr. W. Dean, for Miltonia spectabilis. Banksian medals to Mr. Pratt, for Erica Eweriana, and to Mr. Moffat, for grapes.

PANSIES

LA SUPERBE ARGO- GRAND DUKE OF RUSSIA

THE

FLORIST'S JOURNAL.

OCTOBER 1, 1840.

ON THE HEARTSEASE, OR PANSY.

BY MR. JOHN HENCHMAN, OF EDMONTON.

ONE of the greatest triumphs of hybridisation has been achieved in the case of the heartsease, or pansy; a fact which may easily be demonstrated by instituting a comparison between the "viola tricolor," or common field pansy, and the hybrid varieties exhibited in the Plate attached to this Number, or any of the splendid varieties to be found in the numerous collections of this favourite flower. The grand stimulating causes, to which may be traced the rapid progress towards perfection which, during the last ten years, has been so visible in the pansy, are, unquestionably, the competition and rivalry excited and cherished by the institution of Floricultural Societies throughout the kingdom. It is idle to suppose, that the high prices asked and obtained for certain specimens of the pansy, possessing the desirable qualities of shape, colour, size, &c. would have been generally given, except for the purposes of exhibition, because for border ornament many varieties which to the exhibitor are worthless, are more appropriate than those which are purchased at a high price for exhibition. While, on the other hand, it is equally certain that, had the maximum price of the pansy been that usually demanded for mere border varieties, the assiduity, perseverance, and skill, by the exercise of which the pansy has been elevated to its present standing, would not have been expended on its cultivation.

But while so much has been effected in the way of improvement, a great deal yet remains to be done, ere we dare hope to see a pansy which in every point will bear the rigid scrutiny of a thorough judge. So many concurrent circumstances are requisite to a perfect pansy, that, in my opinion, all which have as yet presented themselves are more or less defective. If, indeed, we judge by comparison with older varieties, we shall be struck with the comparative perfection of many recent ones; but if we form in our mind the model of a perfect pansy, we shall find the best in existence fall short of our standard. What is gained in size is often lost in shape; or if these qualities are both present, a defective arrangement of colour, a confused eye, or a crumpled edge, is apparent, to counterbalance any superiority that the flower may otherwise possess.

Florists are pretty generally agreed on the qualities which are desirable in a pansy: the following hints upon the subject may, however, be interesting and useful to some of our readers.

The first and most important quality is shape or form: this is perfect, when a pencil drawn round the outer edges of the petals would describe, on a sheet of paper, a perfect circle.

The second desideratum is a due proportion between the several petals. Not unfrequently the shape of a pansy may be tolerably circular, while, nevertheless, the lower petal or lip, or even the upper petals, are disproportionably small or large. The eye must be our guide in determining this point of qualification; and let it ever be borne in mind, that, in the lower petal, a depth and width proportionate to the back and centre petals, are essential to perfection. Perhaps the next points in importance are, flatness of the petals and smoothness of the edge. When the petals curl up it is a great defect, and rough jagged edges are sufficient to condemn any flower which is tried by the full standard of perfection. The arrangement of colours now remains to be considered; and if, in addition to the points already enumerated, this be satisfactory, in our judgment the pansy is perfect. Size is of course a desideratum; and without a certain proportion of this quality, a pansy is quite valueless to the exhibitor; but certainly this quality is not essential to the perfection of the flower. A small pansy may be as perfect a flower as a larger one,—the size of the latter being an additional and invaluable excellence, and not a fundamental constituent of its perfection; just as the person of a

small man may present a model of the human form in its highest perfection; but, nevertheless, the additional stature and bulk of another, united with an equal proportion of parts, may invest him with undeniable superiority.

With regard to the arrangement of colour, it must, upon all hands, be admitted, that much, if not the whole, depends on taste. We are quite of opinion that uniformity of ground colour is highly desirable, although seldom attained except in the lighter varieties bred from Thomson's Victoria and flowers of that class. An equal distribution of colour is also much to be desired, and many a variety is comparatively of little value, because there is not a sufficiency of colour in the centre and lower petals to correspond with the richness of the upper petals: this imparts an appearance of poverty to the flower, which detracts greatly from its merit. The lines of the eye should in every case be clear, rich, and full. Such an eye, for instance, as is presented by Argo, the yellow variety figured in this Number, is highly desirable, and especially in dark flowers. In our large dark flowers, the eye is almost invariably defective; and a few rich mulberry, maroon, plum, and other dark flowers, with a clear white ground and a thorough-bred Victoria eye, are greatly to be desired. It is scarcely necessary to remark, that clearness, vividness, and intensity, are the grand desiderata in the colours themselves.

With respect to the culture of the pansy, we write with great diffidence, and would rather the responsibility attaching to this part of the subject had fallen upon one more competent to perform the task with credit to himself and advantage to his readers.

As regards soil, we may remark that the pansy thrives best in a strong rich loam, not a stiff retentive soil, but sandy and well drained. On such a soil but little manure is necessary, and perhaps a little exhausted tan may be found more congenial to the plant than a rich manure, which would excite an unnatural and straggling growth, with proportionally small blooms. A dry gravelly soil is perhaps the most uncongenial; and we should recommend, under such circumstances, that the natural soil should be removed to the depth of a foot or eighteen inches; the bottom and sides of the pit well lined with clay, and then filled with good virgin loam of the desired quality. The usual time for dividing and planting out is the end of September and the month of October.

But where a succession of bloom is desired, we would recommend that a stock of young plants, reared from cuttings—which are always preferable to the divisions of the old plants—be kept in pots, and planted out at various seasons; say October, March, and June. For the first planting choose a warm sheltered border; for the second, a free open space; and, for the June planting, select a shady border, where the plants, without being under the drip of trees, will be shaded by their foliage from the intense and burning rays of the sun.

If the circumstances of soil and situation are thus favourable, the pansy may be retained in bloom during eight months in every twelve, and will produce its beautiful flowers with a very moderate share of attention. In conclusion, I may, perhaps, as a cultivator of the pansy, be excused, if I briefly state the reasons which induce me to think that, of all the florist flowers, excepting perhaps the geranium which is a greenhouse plant, the pansy merits the most extensive patronage. And, first, it is easy of cultivation; secondly, its blooming season is greatly prolonged. The tulip, ranunculus, pink, carnation, &c. are difficult of culture and very uncertain, often disappointing the most assiduous care; and when brought to perfection, we are scarcely aware of their presence before they prepare to depart. And even the dahlia, whose constitution fits it for a prolonged season of blooming, is so susceptible of cold, that in our climate it is often cut down ere it has arrived at its full perfection. Far different is it with the pansy, which amply repays the comparatively small amount of care and expense bestowed upon it, by a long-continued succession and redundant profusion of its beautiful flowers.

ON THE CULTURE OF STANHOPEA.

BY MR. DON.

This is one of the most natural and interesting of orchideous genera, and singular in the formation of its flowers. I say natural, because the greater portion of the genera of orchidea are a mass of confusion, as they are at present constituted. Unless botanists pay more attention to the outward forms of orchideous plants, and

less to the minute parts of their flowers, they will never be able to form any thing like proper genera. Nature, I am convinced, has properly defined every genus by its outward form. All this genus has one leaf to each pseudo bulb, and the flowers proceed out from the base of that bulb.

With regard to their culture, persons who wish to grow fine specimens, ought to put them in large baskets, or pots, so that they may not require to be shifted for several years; as then the plants grow much finer and flower better,—for they are very adverse to being shifted. In the growing of them in pots, it is necessary that they should be elevated about a foot above the rim of the pot. In building up the mound, it should be kept as nearly the width of the pot as possible; the pot should be filled up with large potsherds to within about two inches of the top; over this should be laid the heathy portion of the peat; the peat in which these are grown should be as fibrous as possible; it may be either cut or torn into small portions for building the mound; and it may be fastened on by a few pegs. After the mound is formed, the plant should be planted in the centre, and then it should be placed in the house for a few days without any water. In the growing of them in baskets, they do not require to be elevated, as the baskets are open at the bottom and sides; the baskets should be formed of oak billets; each about one inch in diameter; the depth of the basket should be about three inches; and each bar should be placed two inches apart.

The proper time to remove and repot them should be the growing season, which is towards the latter end of July, or the beginning of August; for, if they are potted in the resting season, and have no water, they are apt to shrivel; and if water is given, they will rot. As soon as they have done flowering they commence growing; and whenever they show signs of growth, should have great heat and plenty of moisture, until they have completed their pseudo bulbs: after this they should be allowed to go to rest,—I mean by rest, that they should be taken out of the moist house and put in the dry one till they show flower. When they do this they should be placed in the moist house, but should have no water, or at least but a small portion, till such time as they begin to grow. By this mode of treatment they will grow much finer than if they were constantly watered. All the plants belonging to this genera push their flowers downwards; hence the necessity of

having the plants elevated or put in baskets, so that the flowers get through and show well.

The following are some of the principal species :—

Stanhopea grandiflora.—This is the first species that was introduced into this country. It is a native of the trees in Brazil ; and as it requires less rest than any of the other species, as it grows and flowers at the same time, it may always be kept in the growing house ; it may be grown in either pots or baskets ; the flowers of it are white, and have a very peculiar scent, not unlike that of rhubarb.

Stanhopea eburnea is only a variety of grandiflora, and not a very marked one. This, like many other of the orchidæ, rises to the rank of a species one day, is brought down to be a humble variety the next, till at last it turns out to be nothing more than grandiflora.

Stanhopea venusta.—This is a beautiful species, and a native of Mexico. The flowers are somewhat in the form of grandiflora, only they are yellow ; and it has a strong smell of the rhubarb that is sold in the chemists' shops. It is a very distinct species, and requires to have a good rest after it has done growing.

Stanhopea quadricornis.—A well-marked species, having four horns on the lip, is not so rich in colour as some of the others, but it has a more delicate scent than many of them. It requires to be grown in a pot or basket. This species flowers earlier than either of the former, and, of course, grows sooner.

Stanhopea saccata.—A most interesting species ; a native of Mexico ; having a large bag at the base of the lip ; hence the name. It has an orange lip with straw-coloured vessels, and petals beautifully covered with dark spots ; this requires a pot or basket. This is also an earlier flowerer,—blowing in May and June, though sometimes later.

Stanhopea Wardii.—A very handsome species. The flowers are of a pale yellow, beautifully spotted ; well worthy the cultivator's attention, as indeed all the species are ; flowers in June and July, and very seldom begins to grow before August ; the number of flowers on a spike is from five to twelve. This requires either a pot or basket.

Stanhopea tigrina.—The tiger-marked. This is really the most splendid and singularly formed species of all the genus ; the lip is dark and of a very fleshy texture ; the vessels and petals are of a

pale colour, with large dark stripes; it flowers in June and July, and begins to grow in August; has from two to three flowers on a spike. It may be considered the very finest of the genus: it requires a pot or basket.

Stanhopea Martiana.—This is a species very nearly related to tigrina. I know nothing further of this "species" than having seen the drawing; but I could see nothing in it to distinguish it from the preceding species. It is about to be described and figured; so that it will soon be seen whether it is distinct or not: it will require the same treatment as the others.

Stanhopea oculata.—A pleasing and very interesting species. The lower portion of the lip has a yellow cast, and has a dark spot resembling an eye; hence the name. The upper portion is like white ivory, and beautifully spotted with purple; the vessels and petals are of a pale straw colour, finely spotted with dark purple.

Stanhopea Devoniensis.—This is a very splendid species, somewhat like tigrina, but not so large, and has a very differently formed lip, and the vessels and petals of a much darker colour. It comes into flower in June and July; it requires either a basket or pot.

Stanhopea insignis. This is another beautiful species; the vessels and petals of this species are pale yellow with purple spots; the lip of it is very curiously formed, and of a thick and fleshy nature. It is impossible for me to compare the flowers of these plants to any thing I know, as they have a form peculiar to themselves, widely different from that of all other known plants.

I do not consider the roots of these plants the principal recipients of food. I think the leaves and pseudo bulbs the proper absorbents of moisture; and that the roots are merely necessary to attach the plants to the places where they are destined to grow. I have seen many of this tribe of plants grow without roots, when these have been cut off, or have died,—though they have not grown so fine, or flowered so well, as those that had roots; but I do not believe that this was because the plants could not absorb sufficient moisture, but because they could not firmly attach themselves to the places where they were growing. The great point in the growing of these plants is to get them firmly rooted to the place where they are to grow. Hence it is absolutely necessary that the peat in which they are grown should be of the most fibrous nature, so that when water is given, it may

pass off quickly; for if any water lodges about the roots they will rot. My opinion being that the leaves and pseudo bulbs are the principal absorbents, I think it is very wrong to give the house any great portion of air, because it must dry up the food of the plants, and so tend to render them weak and unhealthy. The air in the house should be kept up to near the point of saturation. At the time of growing, the plants cannot by any means develop their leaves, and, of course, their pseudo bulbs must be small; the flowers will be small, and few of them on a spike; and they will not have that fine proportion which they have when they are grown in a strong moist heat. It is the opinion of some that much air is necessary in the growing season—but this I deny; and those who attempt it will certainly fail in growing fine plants, or producing good flowers. In Messrs. Rollisson's nursery, here, is to be seen the finest plants in the country; and I believe they have had but little air at any time, and this season none; and yet no plants can look better than they now do, and many of the species have flowered splendidly.—I have said all that I consider necessary about the genus *Stanhopea*, and I hope that many persons will take an interest in this tribe of plants.

Tooting Nursery,
Sept. 18, 1840.

ON THE CULTURE OF HYDRANGEA.

TO THE EDITOR OF THE FLORIST'S JOURNAL.

Sir,—As one of the readers of the Florist's Journal, I take the liberty of addressing you in the character of a humble petitioner. We, practical men, can do many things well. The arts of raising, propagating, and cultivating almost all sorts of plants, whether hardy or tender, we are most of us well acquainted with. But there are various effects of our management, which, though we produce them intentionally, we cannot account for the results in a rational and satisfactory manner. It is, therefore, quite obvious that we require a little sprinkling of philosophy, especially chemical philosophy, to be associated with our general stock of professional knowledge.

I have been led to make these remarks from having had lately to attend to the propagation and subsequent culture of the

Hydrangea hortensis, one of the easiest managed half hardy plants in our collections. The plants under my care were raised from cuttings put into stocking-pots about the beginning of May, 1839. The pots, open twenty-fours, were half filled with crocks, over which the pots were filled up with light sandy loam. Six or eight cuttings, prepared in the usual manner, were dibbled in, watered, and placed in a mild hot-bed, where they were kept shaded from bright sunshine, and rather moist. In less than a month, the cuttings were fit to be put singly into sixty-sized pots, and replaced in the frame, where they were duly watered and gradually allowed a larger share of air. The plants grew healthily, and, in September, were re-potted into forty-eights, and the strongest into thirty-twos; and removed out of the frame to an open but shady spot. Soon after this the plants were set close under a south wall, in order that the shoots might be thoroughly ripened before the end of October, when they were taken into the greenhouse for the winter, and there watered sparingly.

I was desirous of having some of them with blue flowers; and when they were potted for the last time, I used different kinds of compost for that purpose. Some were potted with the usual mixture for greenhouse plants, namely, light loam, peat earth, leaf-mould, and white sand. Others were placed in pure mellow loam; some in pure peat; for others a red-coloured sand was mixed with the peat; and for a few a blackish kind of strong loam was employed.

The results, as presented this year, have not been uniform; as some blue flowers have been produced from several of the composts; but mostly, I think, from the peat and red-coloured sand. Now, my petition to you is, to explain to us the cause of colour in general; and, particularly, what is that quality existing in soils which effects a change of colour in the flowers of the Hydrangea?

Berks, September 3, 1840. QUERIST.

[We shall make inquiry, and endeavour to get some light thrown on the subject alluded to; at the same time we invite others to follow the example of "Querist," and communicate their difficulties freely and candidly to us. Of course, we have not the vanity to presume that we ourselves personally are to solve all or any of the difficulties of practical men. Our object is to render them instructors to each other; and our own proper business is to offer the "Florist's Journal" as the vehicle of mutual and reciprocal instruction to all who cultivate, or who love the beauties of Flora.]

VISITS TO NURSERIES. NO. VII.

MESSRS. ROLLISSONS' TOOTING NURSERY.

The grounds and houses belonging to the Messrs. Rollissons, are so extensive, so varied, and so valuable in their contents, that it would be impossible to do any thing like justice to more than a single department in one number of our journal. Therefore we have restricted our present remarks to a brief survey of the greenhouses and stoves, and shall reserve the other grounds for a future opportunity. These houses contain the most extensive, the most varied, and the most healthy collection of intertropical and other warm country plants, which we ever witnessed; and if, taking it in all points of view, this collection has a rival in England, we are quite sure that it has no superior.

The nursery is situated in the parish of Lower Tooting, in the county of Surrey. On entering the shop, which is placed on the side of the public road, the first house one enters is a large greenhouse of about 150 feet in length. This house is, for the most part, filled with Rhododendrons and Azaleas, intermixed with some fine specimens of greenhouse plants. It contains a fine plant of the rare Acacia Cultriformis, which plant is very difficult of cultivation; also Acacia pentadina a beautiful species, rutifolia, and nigricans; Hovea linearis, and Celsii, all large specimens. There is a choice assortment of the most splendid Rhododendrons,—amongst them are some fine plants of that lovely species, the Rhododendron Rollissonii, which is, without exception, the most magnificent of the genus. There are many others here, not inferior in point of beauty, though differing much in colour. In the lower portion of the same house there is a splendid collection of Azaleas. In the centre, on the wall at the back, planted out, is a splendid specimen of the Wistaria Sinensis, which runs nearly the whole length of the house. In the early part of the season, this plant has a most noble appearance, being one mass of beautiful light blue flowers; and it flowers very often from the young wood as well as from the old and ripened wood, so that it may be said to flower for the greater part of the year.

On leaving this house, one enters the heath-house, which is 100 feet in length. Here one finds the most splendid collection of heaths—(the Messrs. Rollissons have always been noted for

having the finest and best cultivated collection of heaths round London);—for, in the whole house, there is not to be found an ill-grown or unhealthy plant. On leaving the heath-house, one enters the camellia-house. This is a large house, and contains a very rich and splendid collection, with some fine specimens of these lovely plants,—among others there is a fine specimen of the Camellia reticulata, or netted-leaved Camellia.

At the back of the camellia-house are the houses and pits for propagating. In one of the propagating-houses, there is a fine plant of the Stephanotis floribundus, a splendid climber. The flowers are white; and it is a most abundant flowerer, and has a very sweet odour. Along with this plant there is also a fine plant of the Ipomea Horsfallii.

On leaving the camellia-house, we enter the orchideous-house, where there is a most splendid collection, and, without exception, the best cultivated and the finest specimens in the country. On looking along this house you will see some noble plants, such as Cattleya crispa, and guttata; Pensterea alata; Dendrobium noble, and imbricata, and chrysanthim; Oncidium Lanceanum; Stanhopea oculata, and insignis; Lelia anceps, with eight spikes of flowers on it; also, a fine plant of that Renanthera coccinea, and another of the Epidendron tibinus,—which last is said to be the most splendid of all the Mexican orchideæ; with many others equally as fine as those that we have mentioned.

At the back of this house is the stove, in which there is a fine collection of rare and beautiful plants, among which there are some beautiful new climbers, such as a beautiful yellow Cobea, some fine Ipomeæ, and a very good collection of bulbs. In the front of this house, out of doors, in a small border, is the full collection of the beautiful genus Alstromœria, growing and flowering to the greatest perfection, and without any protection in the winter. We never saw them grown so fine in pots and with the protection of a greenhouse, as they are doing here.

At the back of the stove, there is a small house in the open ground for growing plants for cuttings; and in front of the orchideous-house, there are pits for the purpose of putting in the newly-potted heaths in the summer, for Camellias during a portion of the summer, and for keeping half-hardy plants in the winter. After leaving these, one enters the specimen heath-house. In this house there are many fine and rare plants of heaths, such as *Erica acuminata, **E. acumi-

nata longiflora, *E. acuta, **E. Aitoniana, *E. albens, **E. ampullacea, **vittata, **E. ampullacoides, **E. Andrewsiana, *E. arbuscula, **E. Archeriana, **E. ardens, **E. aristata, **E. Aristella, **E. Bandoniana, **E. Batemania, **E. Beaumontiæ, **E. Bergiana, *E. Bowieana, *E. buccinifiora, *E. calycina, *E. Colyeina capitata, **E. carinata, **E. Cavendishiana, **cerinthoides major, **E. Celsiana, **Cliffordiana, **E. Clowesiana, **E. cubica minor, **E. Cushiniana, **E. denticulata, **E. depressa, **E. dilecta, **E. elegans, **E. elongata, **E. eximia, **E. exurngens, **E. ferruginea, **E. florida, **E. fragrans, **E. gemmæfera, **E. grandinosa, **E. halicacaba, **E. Hartnelli, **E. Hibbertiana, **E. Humeana, **E. impulsa, **E. inflata, **inflata nubra, **E. Irbyana, **E. Jasminiflora **nana, **E. Lambertiana, **E. Lawrenciana, **E. Lawsonia, **E. Leeana, **E. Linnæoides, **E. magnifica, **E. Massonia, **E. metulæflora biflora, **E. mirabilis, **E. monsonia, **E. mundula, **E. mutabilis, **E. nitida, **E. adora-rosæ, **E. penicilliflora, **E. perspicua, **E. perspicua nana, **E. princeps carnea, **E. pulchella, **E. pulcherrima, **E. reflexa alba, **E. retorta, **E. retorta major, **E. Rollissoni, **E. Russeliana, **E. Savileana, **E. Shannoniana, **E. Smithiana, **E. splendens, **E. sprengeli, **E. Templea, **Thunbergii, **E. tortiliflora, **E. tricolor, **E. tricolor elegans, **E. tricolor superba, **E. trossula alba, **E. ventricosa alba, **E. ventricosa hirsuta, **E. ventricosa superba, **E. venusta, **E. vernix, **E. vernix coccinea, **E. vestita alba, **E. vestita coccinea; with many others equally fine. All those that are marked thus **, we consider the finest.

Many of the plants are very large and well formed.

From this house we proceed on to the new house, which is filled with orchideous plants that are small, and the newly-imported ones. There are some fine specimens of Cattleya, which are new, and some of them are about to flower. Messrs. Rollissons entertain a good opinion of them, and expect they will prove splendid; and we hope their wishes will be gratified.

On leaving this, one enters the New Holland house, which is very large; and, when the plants are in, the house has a fine appearance, as the plants are all fine, young, and healthy. In front of this house, are several ranges of pits for the more hardy portions of greenhouse plants. In front of the heath-house, is the ground appropriated for the greenhouse plants and heaths in

the summer; in this ground are to be seen some hundreds of seedling Rhododendrons, a number of hybrids and species together; so that we may look forward with great expectations to their proving something more splendid than any that have yet flowered in this country. In the heath-house there is a splendid specimen of the Lilium speciosum roseum, and also of the Lilium speciosum album.

The plants at present in flower in the orchideous-house are: **Stanhopea insignis, and grandiflora; *Epidendron cuspidatum, ciliara, and elongatum; Cattleya Forbesii, **Harrisonii, and Loddigesii; also, Mossæ versicolor; Catesetum tridentata several varieties, and Juridum and semeapertum; Oncidum Harrisonii; Dendrobium secundum, and Chrysanthum; Zygopetalum maxillaris, stenopitalbium, and crinatum; Dendrobium alpestre; Pholidata imbricata; Cycnoches Loddigesii; Catesetum cristatum; Oncidim lanceam—or what is called "the king of the woods;" Stelis tristylis; Polystachia purpurescens, and latiola; Acropera citrina, and Loddigesii; Gongona ignea, and maculata; Calanthe bifurata; veratrifolia; Vanda multiflora; and Epidendron elliptica. In the stove, the plants now in flower, are: Curcuma Roscoeana; Gastrochilus pulcherrimus; and Griffinea Hyacinthina, which are three rare and beautiful plants.

FLOWERING OF CEREUS TRIANGULARIS.

This well-known but remarkably shy-flowering species came into bloom on Monday the 14th, and again on Tuesday the 15th of September, in the conservatory of W. M. Christy, Esq. of the Clapham-road. If this is not the first time that this splendid flower has blown in England, any former blowing of it must have been both rare and obscure, inasmuch as we have been able to find no record of a former instance. Through the kindness of the proprietor we have been enabled to obtain a drawing, which we shall shortly publish, with some remarks on the plant and its genus; and so, in the meantime, we shall barely notice the fact.

The plant, which is one of straggling growth, has grown to a considerable height, and pushed its roots along the shelves, almost to the opposite side of the house, which is rather a large one. For a considerable time, it had been what most growers would call neglected, that is, it had been dried till it bore very much the appearance of being dead; but when Mr. Crichton, the present gardener, entered on his charge, he, judging that the plant had had abundant rest, applied the usual stimuli to bring it into action. It revived easily; but did not push for additional stems, though those which it had recovered their freshness. In a short time, however, two flowers, promising to be very large ones, made their appearance, progressed to maturity in a very regular way, and expanded on the evenings of the two days above stated. We had seen them on the plant a day or two before; and, having received intimation, we arrived at the conservatory about midnight, just in time to see the flower at its greatest expansion. At that time the length of the tube was more than a foot; and the expansion of the cup or terminal part of the tube, about eight or nine inches. It soon began to show signs of closing, upon which it was cut with part of the stem; and after being shown, and memorandums of it taken, it was placed in a box partially filled with silver sand a little moistened, in which the portion of stem and lower end of the tube were plunged. In this state it remained perfect all the next day, when it was carried to the rooms of the Horticultural Society for exhibition, and we believe it lasted some days longer. The second bloom, from which our drawing was taken, expanded on the Tuesday night, and was cut on Wednesday morning, after which the requisite data for the drawing were obtained, the flower being in full perfection at the time. As we said before, we shall another time enter more at length into the particulars of these flowers, and their native habits and habitats, together with the best means of growing and flowering them, so we now conclude with renewed expressions of gratitude to Mr. Christy for his liberality, and of congratulation to the lovers of choice exotics in being now in possession of a night-flowering Cereus, which contrasts finely with *C. grandiflora*, and is scarcely inferior in the size and splendour of its blooms, which appear to be of a rather less perishable nature.

GLADIOLUS SPLENDIDISSIMUS RACEMOSUS.

This new and choice variety of gladiolus flowered this season in the grounds of a foreign gentleman residing near London, the first instance, we believe, of its having flowered in any part of Britain. Indeed we are not aware that the plant has been introduced before the importations of the present season. Mr. Groom has ordered, and we believe received it, for next year's growth; and, from its great beauty, we have no doubt that it will be a special favourite. We were fortunate enough to obtain a drawing of the plant when in flower, which we trust we shall be able to publish long before any other specimen can bloom in this country.

ON THE HYACINTH, AS A BORDER FLOWER.

BY MR. R. PLANT, GARDENER TO — MAY, ESQ. THE HOWE, NEAR HALSTED.

The Hyacinth, whether considered as an ornament of the conservatory, the drawing-room, or the flower-garden, which indeed is its natural situation, has certainly great claims on our attention and care; its symmetrical form, its delicate and varied colours, and delightful fragrance, which is no mean rival of that of its successor, the rose, combined with the season of its blooming, —a time when any flower is acceptable,—rank it as one of the most favoured of Flora's gems.

It is affirmed, and almost universally received as an indisputable truth, that the Hyacinth cannot be grown in this country two successive seasons with success; but no reason, founded on scientific principles, or even on natural consequences, has ever yet been adduced to account for the many failures that occur,—failures so frequent and great as to induce many persons to give up the attempt. It consequently follows, in the absence of any other cause, that the mode of culture usually adopted in this country is not the one best suited to the growth of this delightful flower. And, to show the justness of this conclusion, I will draw a comparison between it and that of the Dutch florists, who are eminently successful in the cultivation of this and most other bulbous-rooted plants. According to the English method, a great

deal of trouble is taken in what is called preparing the ground. An immense quantity of sand is mixed with the soil, and that often of the worst quality, viz. coarse yellow pit sand, the very worst thing possible to put under the roots of any plant; in fact, this is always insisted on as of the first importance, insomuch so, that I remember one writer on the subject recommending, where sand (I believe he said sea-sand) could not be procured, a mixture of magnesia, carbonate of soda, and a variety of other chemical ingredients, that only required a pretty strong stimulant to set the whole in such a fermentation as would be sufficient to subdue the most obdurate hyacinth in any of our florists' lists, lengthy as they are.

In the next place, the manure used is generally old exhausted material, sometimes two or three years old; with this mixture, to say nothing of the soot, &c. usually introduced, the plants, when in bloom, from the light drying nature of the composition, require a great quantity of water, which is very prejudicial to them. A great error also exists in planting these, and indeed most other bulbs, that is dibbling them in; this causes a hard crustation of the soil round the sides of the bulbs, and also leaves a cavity directly under the bulbs, in which the water collects, which, if it does not immediately cause the bulb to rot, materially retards the formation of spongioles, and, consequently, the plant produces a small insignificant bloom. Now, though the hyacinth will grow and blow in water alone, it must be remembered that it is not then exposed to frost, &c.; also, that water is changed frequently, so that it does not become impure from stagnation. And, again, when taken up, the roots are generally exposed to the scorching rays of the sun for three or four days, or a week, are then put into bags or on shelves, and no more trouble taken with them till the next planting season, when they are generally found either shrivelled to nothing, or two-thirds of them rotten.

I have thus stated, in plain terms, the misfortunes and errors to which a collection of these lovely flowers are often subjected, and at which I hope my brethren of the blue apron will not feel angry; for I consider them far less to blame (such having been the practice for many years) than those who were in possession of the better method, and would not make it known. Such persons I look upon as worse than misers, for we should always remember that

"Imparted knowledge doth not diminish learning's store."

And now that we have such books as "the Florist's Journal" open to make known any improvements in the delightful art, or in which to get our doubts so readily solved, such persons appear doubly culpable. But I am digressing. I will now endeavour to explain the method by which the Dutch florists are enabled to grow the hyacinth to such perfection, and which I have found from experience to be far superior to that I have already mentioned.

Let the bed intended for hyacinths be in an open yet warm situation. The soil should be rich and free; that is, it should be of such a texture that it may be easily worked in winter, yet retain its moisture in summer; let the ground be well dug in the beginning of October, laying in a stratum of *fresh* cow-dung, about six or eight inches from the surface, breaking the soil over it very fine. This may, perhaps, appear rather startling to some, but if once tried, I am satisfied it will not be rejected; they require nothing else. About the end of the month the roots should be planted: to do this, remove the entire surface of the bed about four inches deep, rake it level, and place the roots eight inches apart, taking care to mix the colours judiciously; cover them about two inches above the crown of the bulb. I should have mentioned that a level bed is the most proper one; for if there is any inclination of the bed, the water will run from the middle to the outside rows, and consequently render them very liable to rot. If the winter prove severe, a little loose litter should be thrown over the bed, which should be removed as early as possible. In such things as this, the cultivator's own judgment must be the guide. When the plants are in bloom, they only require to be kept neatly tied up and constantly weeded.

As soon as the bulbs are ripe, which may be known by the foliage pulling off easily, take them up; let it be on a dry day; and as soon as you have got them up, rake a piece of ground clean and level, place the roots sideways on it in such a manner that they do not touch each other; then cover the whole over with about six inches of dry earth. This is what may be called proving them; the Hyacinth being subject to a disease, a kind of rotting, which does not always show itself on first coming from the earth; but if one so infected was put into a heap, it would immediately communicate the disease to every root that touched it; hence the necessity of keeping them separate, which could not be done

any where so effectually as in the earth, it also acting as a medium for the admission of the sun's ray; and so by this process, the supply of nutriment is gradually dried off. At the expiration of a fortnight take them out of the earth, observing most particularly to pick out any that may be rotten; lay them on shelves in a shaded place to dry, and when thoroughly dry, cut off the whole of the dry rootlets, clean them and put them away in a dry place: they may then be left with safety till wanted.

By this method, the plants will retain their utmost vigour for many years, always changing the soil or situation at each planting.

The offsets should be planted by themselves, and with the same treatment they will flower the second season.

The number sticks may be managed as directed in our article on the Ranunculus.

In a future number I shall have great pleasure, if acceptable to the readers of the Florist's Journal, in giving some account of the method of forcing this most beautiful flower.

THE WEATHER FOR SEPTEMBER.

THE general characters of the weather for this month, at least within the scope of our observation, have continued to bear out that opinion which we have stated ever since the commencement of our labours, with regard to the effect of the prolonged rains of the preceding season upon the subsoil of the ground. The surface action has all along been considerable, and perhaps more so than if a less humid state of the bottom of the soil had enabled the general action to be greater. This humidity has prevented the heat from penetrating deeply into the ground; and, consequently, the nocturnal radiation has been less than the average. The result of this has been a nearer approximation to the point of saturation with moisture in the lower stratum of the air, after the direct influence of the sun had ceased for the day. This approach to saturation in the night air was of course greater upon low grounds, and grounds which were warmer during the day, than upon such as were more upland and exposed.

In consequence of this, when, after the rains on the 13th, 14th, and 15th, north winds, with dry and warm days, set in on the 16th and 17th, the evenings of those days, or rather the early mornings after them, produced hoar frost. Upon the dry heights, with gravelly bottoms, in the neighbourhood of the metropolis, those hoar frosts were barely perceptible, and produced no apparent effect except upon a few of the most tender of the exposed plants; but, in low situations, and more especially in those near the river, or other considerable expanses of water, the leaves of dahlias, potatoes, and several other plants, were blackened, and some were entirely destroyed, at least in the above-ground portion. So marked has the difference been between what is considered as the

favoured and the unfavoured grounds, in the near vicinity of each other, and so completely have tender plants upon the latter escaped, as compared with the same plants on the former, that various conjectures have been raised among practical men as to what may have been the cause.

Now, though the reason is a very simple and obvious one to those who have paid even a moderate degree of attention to the philosophy of the weather, yet it may not be amiss to state it briefly; because it is of no small importance to cultivators of tender flowers, or indeed to cultivators generally, who have crops in a growing state, when the hand of winter begins to be laid, however slightly, upon the skirts of the departing summer. In the first place, as the plant is subjected to more violent action, and makes a stronger growth in the lowland situation, it is less hardy in its nature. In the second place, the greater warmth of the air over such a place makes it take up much more moisture during the day, than the air upon the height is capable of sustaining. In the third place, the difference of temperature between the day and the night is greater in the warm places than in the more bleak and elevated, for the very same reason that the temperatures of the day and night differ more in tropical countries than in temperate ones. Therefore, in the fourth place, the air immediately over the low ground being both more saturated with humidity, and more disposed to part with it, much sooner makes a deposit on the leaves and flowers of plants; and this deposit is dew or hoar frost, according to the temperature; and it is not the forming of the hoar frost, but the melting of it, when the heat returns, and more especially the turning of it rapidly into vapour by the direct heat of the sun, which disfigures or destroys the more tender plants. When countries are in a state of nature, the plants are adapted to their circumstances, so that fogs and hoar frosts, which would be destructive on a surface in high cultivation, creep harmlessly along the swampy valleys of the uncultivated highlands. But it will always be found that the grasses there are of the coarser species; and if man should come and build his cottage, and form his little garden close by the brook, he would find his potatoes stricken black to the earth, while those of his neighbour, on the free and clear hill side, remained in all their greenness.

What has now been stated can be verified by any one who chooses to observe; it may furnish many hints as to the spots most eligible for the situations of tender plants, when a choice of these can be had; and therefore we have considered the mention of it as more useful than a mere diurnal register of the weather, which every one can make for himself.

CALENDAR FOR OCTOBER.

Stove.—Finish repotting; every plant that requires it should now be shifted. Always use clean pots and plenty of drainage. Prune in all climbing-plants. Ferns should now be separated and repotted. Cacti, Euphorbias, and other succulents require less water now. The earth about the roots of plants turned out in the borders of the house will require renewing. Cuttings struck last month should be potted and kept rather warmer than those struck

earlier. Air may yet be given in fine weather, but it should be in less quantity and for a shorter time: towards the end of the month a little fire-heat will be necessary.

GREENHOUSE—Here also the potting must be finished as early as possible. Greenhouse plants that have been in the open borders during summer should be taken up, the matted roots cut off, and the plants repotted. Layers of Verbena, &c. should be potted and placed in a warm part of the house. When there is not sufficient room in the greenhouse, all the kinds of Fuschia and the hardy kinds of Geraniums may be kept in a dry shed, by turning the plants out of the earth and covering them thickly with loose litter. Chrysanthemums should be brought in to flower. Give all the air possible on fine days. Water sparingly. The principal thing to be observed is keeping the house as dry as possible.

FLOWER GARDEN.

As soon as the bloom is well off the Dahlias, they should be cut down; the roots taken up and dried; the choice ones put away perfectly secure from frost, and the common ones may be pitted in the same manner that potatoes are buried. Auriculas should be cleaned and put into winter quarters; take care there is no drip upon them.

Prepare the ground for, and plant, Tulips, Hyacinths, Crocus, &c. Hyacinths for forcing should now be potted; also Double Tulips, Narcissus, Jonquils, Iris, &c. Cuttings of China and other Roses may now be potted and put into a cold frame.

The end of the month is a good time to make any alterations that may be required in the flower garden. Prune and plant shrubs.

Keep the lawns mowed as close as possible while the weather continues open. Clip edges for the last time. The cultivator should now be looking forward to the approach of winter, and provide accordingly.

FLORAL INTELLIGENCE.

LEICESTERSHIRE FLORAL AND HORTICULTURAL SOCIETY. The Third Exhibition was held on the 29th July. Prizes awarded:—

CARNATIONS.—FIRST CLASS.

First pan of 9 flowers...Mr. Smalley, with Smalley's King, Cartwright's Rainbow, Smalley's Fair Helen, Malpas's Lady Grey, Smalley's Victoria, Hufton's Drusilla, Palmer's Flora, Derby Willow, Smalley's Prince Albert.

CARNATIONS—SECOND CLASS.

First pan of 6 Carnations...Mr. Smalley, with Walmsley's William IV., Earl Howe, Pearson's Madam Mara, Queen Dowager, Smalley's King, and Wonderful.

First pan of 6 Picotees...Mr. G. Hudson, with Hardy's Catherine, Wheatley's Lucy, Imogene, Matchless Hero, Julia, and Hudson's Phœbe.

First pan of 3 Carnations...Mr. Smalley, with Smalley's Wonderful, Butterfly, and Adelaide.

First pan of 3 Picotees...Mr. Smalley, with Parker's Sir Thomas, Palmer's Flora, and Parkinson's Diana.

CLASSES.

Scarlet Bizarres....1. Seedling (Romeo), Mr. W. Musson; 2. Seedling (Locomotive), Mr. R. Marris; 3. Ely's Colonel Wainman, ditto; 4. Hepworth's Leader, Mr. G. Hudson; 5. Ely's Jolly Dragoon, Mr. R. Harris, jun.; 6. Duke of Devonshire, ditto; 7. Gameboy, Mr. G. Hudson; Walmsley's William IV., ditto.

Crimson Bizarres...1. Paul Pry, Mr. R. Harris, jun.; 2. Hudson's Bishop of York, Mr. G. Hudson; 3. Spitfire, Mr. G. Hudson; 4. Gregory's Alfred, ditto; 5. Cartwright's Rainbow, Mr. J. Smalley; 6. Hudson's Squire Dawson, Mr. G. Hudson; 7. Taylor's Birmingham, Mr. R. Marris; 8. Lee's Duke of Kent, Rev. S Wigg.

Scarlet Flakes...1. Addenbrooke's Lydia, Mr. G. Hudson; 2. Toone's Ringleader, ditto; 3. Simpson's Marquis of Granby, Mr. R. Marris; 4. Orson's Rob Roy, Mr. G. Hudson; 5. Smalley's Fair Helen, Mr. R. Marris; 6. Thornicroft's Brilliant ditto; 7. Seedling, Rev. S. Wigg; 8. Madam Mara, Mr. G. Hudson.

Rose Flakes...1. Hudson's Lady Flora, Mr. G. Hudson; 2. Greasley's Village Maid, ditto; 3. Duchess of Devonshire, ditto; 4. Duchess of Kent, ditto; 5. Madam Vestris, Rev. S. Wigg; 6. Sir Geo. Crewe, Mr. W. Mitchell; 7. Lady Grey, Mr. R. Marris; 8. Smalley's Wonderful, Rev. S. Wigg.

Purple Flakes...Simpson's Invincible, Mr. S. Smalley; 2. Queen of Sheba, Mr. G. Hudson; 3. Mrs. Thornton, ditto; 4. Charlotte, Mr. R. Marris, 5. Seedling, Rev. S. Wigg; 6. Ely's John Wright, Mr. Smalley; 7. Seedling, Mr. G. Hudson; 8. Smalley's Victoria, Mr Smalley.

Light Edged Red Picotees...1. Wood's Victoria, Mr. G. Hudson; 2. Palmer's Flora, Mr R. Marris; 3. Russell's Incomparable, Mr. R. Harris, jun., 4. Miss Bacon, Mr. J. Smalley; 5. Martin's Victoria, Mr. W. Mitchell; 6. Sharpe's Unique, Mr. R. Marris; 7. Seedling, Mr. G. Hudson; 8 Fanny, Mr. R. Marris.

Heavy Edged Red Picotees...1. Derby Willow, Mr. R. Marris; 2. Martin's Prince George, ditto; 3. Taylor's Lady Nelson, ditto; 4. Seedling, Mr. R. Harris, jun.; 5. Hudson's Victory, Mr. G. Hudson; 6. Seedling, ditto; 7. Parker's Sir Thomas, ditto; 8. Seedling, ditto.

Light Edged Purple Picotees...1. Hudson's Phœbe, Mr. G. Hudson; 2. Mary Ann, Mr R Harris, jun.; Hufton's Miss Willoughby; 4. Hudson's Maria, Mr. G. Hudson; 5. Seedling, ditto; 6. Enchanter, Mr. R. Marris; 7. Seedling, Mr. R. Harris, jun.; 8. ditto, ditto

Heavy Edged Purple Picotees...1. Hudson's Julia, Mr. G. Hudson; 2. Seedling, Mr. J. Smalley; 3. ditto, ditto; 4. Drusilla, Mr. R. Marris; 5. Seedling, Mr G. Hudson; 6. Isabella, Mr. R. Marris; 7. Victoria, M. J. Smalley; 8. Beauty of Northampton, Mr. R. Marris.

First 12 Pansies...Mr. R. Harris, jun.
Second ditto...Mr. Mott.
First 6 ditto...Mr. R. Harris, jun.
Second ditto...Mr. Harden, gardener to C. B. Robinson, Esq.
First 3 Stove Plants...Vinca Alba, Vinca Rosea, and Hibiscus Rosa Sinensis, Mr. Freer.
Second ditto...Hibiscus lutea Sinensis, Hibiscus fulgens, and Caladium bicolor, Mr. Freer.
First 3 Greenhouse Plants...Fuchsias, fulgens, globosa, and conica...Mr. Stacey.
Second ditto...Nerium splendens, Hoya carnosa, and Gnaphalium eximium, Mr. Freer.

DAHLIAS.

1. Ruby, Mr. J. Harden; 2. Hope, Mr. W. Mitchell; 3. Headley's Perfection, Mr. Mortimer; 4. Defiance, Mr. W Mitchell; 5. Springfield Rival, Mr. R. Harris, jun.; 6. Premier, Mr. T. Christian; 7. Rival Yellow, Mr. C. Mortimer; 8. Topaz, ditto; 9. Lord Liverpool, Mr. Stone, 10. Sir H Fletcher, Mr. G. Walker; 11. Fireball, Mr. R. Harris, jun.; 12. Harris's Conquer, Mr. W. Mitchell.

Six Herbaceous Plants, Mr. R. Marris...Lychnis Chalcedonica plena, Penstemon gentianides, and Pubescens Lathyrus grandiflora, Potentilla Hopwoodiana, and Dianthus Hispanicus.

Wolverhampton Horticultural Society. Prizes awarded.

Best 3 Stove Plants...Cyenoches Loddigesii maxillaria stapeliordes, Acropera Loddigesii, Messrs. Pope and Son.
Best 3 Greenhouse Plants...Salvia patens, Cassia australis, Sollya hetrophylla, Mr. Green
Best 3 Geraniums...Garth's Perfection, Rendle's Alarm, Climax, Mr. Green.
Best single Geranium...Louis Quatorze, Mr. Mowbray.
Roses, best pot...La Marquie, ditto.
Best 3 Herbaceous Plants...Liatris pumila, Verbena Elfordiensis, Calliprora flava, Messrs. Pope and Son.
Pansies, 20 blooms...Not named, Mr. Stubbs.
Best single Fuchsia...Magniflora, Mr. Mowbray.
Best 3 ditto...Splendens, grandiflora, elegans, Mrs. H. Hordern.
Best 3 Cockscombs...Dwarf, ditto.

Hardy Annuals...Sphenogyne speciosa, Rhodanthe Manglesii, Schyzanthus pinnatus. Mr. B. Hicklin.

Basket of Plants...Mr. Mowbray.

Carnations, best 14 pair...Duke of Devonshire, Huntsman, Gameboy, Rainbow, Paul Pry, Paulina, Lady Hill, Beauty of Cradley, Red Rover, Miss Sitwell, British Queen, Village Maid, Lady Hood (Seedling), Seedling, Mr. Thos. Aston.

Ditto, Scarlet Bizarres...1. Duke of Devonshire, Mr. J. Elliot; 2. Gameboy, Mr. Bullock; 3. Leader, Mr. Aston.

Ditto, Crimson Bizarres...1. Rainbow, Mr. Aston; 2. Paulina, ditto; 3. Lady Hill, ditto.

Ditto, Purple Flakes...1. Bellerophon, Mr. Crowdry; 2. Queen, ditto; 3. Victoria, Mr. Cartwright.

Ditto, Scarlet Flakes...1. Roseaby, Rev. G. F. Molineux; 2. Red Rover, Mr. Aston; 3. Cleopatra, Mr. J. Elliot.

Ditto, Rose Flakes...1. Rosetta, Mr. Crowdry; 2. Seedling, Messrs. Pope and Sons; 3. Lady Hood, Mr. Bullock.

Scarlet Picotees —1. Venus, Rev. G. F. Molineux; 2. Lord Sondes, Mr. Thomas Smith; 3. Nymph, Mr. Crowdry.

Purple ditto...1. Lady Peel, Mr. Crowdry; 2. Isabella, Mr. Cartwright; 3. Cleopatra, Mr. Aston.

Extra Prize.—Orange Tree...Mr. Green.

August 5. CHESTER HORTICULTURAL SOCIETY. Summer Exhibition. Prizes awarded:—

Carnations...1 pan, Mr. Evans; 2. Mr. Hough; 3. Mr. Roberts.

Pink Bizarre...1. Mr. Thomas, Paul Pry; 2. Mr Evans, Lord Milton; 3. Edwards, Walker, and Co., Rev. J. Plumptre; 4. Mr. Evans, Alfred; 5. Mr. Evans, Cestrian; 6. Mr. Hough, Pottery Queen; 7. Mr. Evans, Harkaway.

Scarlet Bizarre...1. Mr. Lowe, Game Boy; 2. Mr. Lowe, Duke of Leeds; 3 Messrs. Edwards, Leader; 4. Mr. Evans, Duke of Lancaster; 5. Mr. Evans, Colonel Lee, 6. Mr. Evans, William IV.; 7. Mr. Evans, Dragoon.

Scarlet Flake...1. Mr. Noyes, Rob Roy; 2. Mr. Evans, William IV.; 3. Edwards, Walker, and Co., Lady Hill; 4. Mr. Evans, Lydia; 5. Mr. Evans, Bright Venus; 6. Mr. Hough, Mondes Susannah; 7. Mr. H. Thomas, Dr. Barnes.

Purple Flake...1. Mr. Evans, Major Cartwright; 2. Mr Evans, Ely's Victoria; 3. Mr. Evans, Mango; 4. Mr Hough, Ely's John Wright; 5. Mr. Evans, Enchanter; 6. Mr. Evans, Linnæus; 7. Mr. Evans, Invincible.

Pink Flake...1. Edwards, Walker, and Co, Marchioness of Westminster; 2. Mr Evans, Conquering Hero; 3. Mr. H. Thomas, Lady Egerton; 4. Mr. Evans, Lady Scott; 5. Mr. Hough, Queen of Roses; 6. Mr. Evans, Lady Grey; 7. Mr. Evans, Fair Flora.

Purple Picotee...1. Mr. H. Thomas, Princess Victoria; 2. Mr. Evans, Queen of Sheba; 3. Mr. Hough, Martha; 4. Mr. Evans, Drusilla; 5. Mr. Evans, Unknown; 6. Mr. Hough, Cleopatra; 7. Mr. Evans, Lucy

Red Picotee...1. Mr. Evans, Mrs. Horner; 2. Mr. Hough, Nonpareil; 3. Mr. Edwards, Marc Antony; 4. Mr. Evans, Lord Brougham; 5. Mr. Evans, Lady Talbot; 6. Mr. Edwards, Will Stukeley; 7. Mr. Evans, Unknown.

Seedlings...Scarlet Flake, Mr Lowe; Purple Flake, Mr. Lowe; Pink Flake, Mr. Evans; Purple Picotee, Mr. Noyes; Red Picotee, Mr. Lowe.

Dahlias...1. Nurserymen, Messrs. Dickson; 2 Amateurs, Mrs. Yates; Best Scarlet, Mr. Roberts, Fire Ball; Best Dark, Mr. Kelly, Dr. Halley; Best Yellow, J. Fielden, Esq, Topaz; Best White, Mrs. Yates, Virgin Queen; Best Lilac, Rev. P. W. Hamilton, Madonna; Best Purple, Rev. P. W. Hamilton, Stuart Wortley; Best Crimson, E. S. Walker, Esq., Springfield Rival; Best Rose, Mr. J. Roberts, Ruby; Best Tipped or Striped, E. S. Walker, Esq., Lady Dartmouth.

Best Pansies (pan), Messrs. Dickson.

Hothouse Plants...1. Messrs Dickson, Stanhopea insignis variety; 2. H. Hesketh, Esq, Russellia juncea; 3 C. Potts, Esq., Bletia Tankerville; 4 Messrs. Dickson, Stanhopea insignis; 5. J. Fielden, Esq., Gongorn Sps. Demerara; 6. Messrs. Dickson, Eulophia Maxillaria; 7. C. Potts, Esq., Erythrina Crus Galli.

Greenhouse Plants...1. C. Potts, Esq, Tropœolum Pentaphyllum; 2. H. Hesketh, Esq., Sollya heterophylla; 3. Messrs. Dickson, Astelma eximium; 4. C. Potts, Esq., Nierembergia gracilis; 5. Messrs. Dickson, Salvia patens; H. Hesketh, Esq., Loasæ aurantica; 7. Messrs. Dickson, Fuchsia fulgens.

Geraniums...1. Messrs. Dickson, Sylph; 2. P. Hamilton, Esq., Joan of Arc; 3. Mr. Roberts, Parker's Triumphant.

Annuals (pan)...Messrs. Dickson.

August 5. YORK HORTICULTURAL SOCIETY. Prizes awarded.

Carnations, Scarlet Bizarre...1, 2. Mr. Hardman, Coney-street, for Hoyle's Duke of Leeds; 3. Rev. L. Hird, Bootham, for Game Boy.

Ditto, Pink Bizarre...1, 2, 3. Mr. Hepton, Clementhorpe, for Lucretia and Paul Pry.

Ditto, Scarlet Flake...1. Mr. Hepton; 2. Mr. Merryweather, Walmgate; 3. Rev. L. Hird, for Wilson's William IV.

Ditto, Purple Flake...1, 2, 3. Rev. L. Hird, for Bellerophon.

Ditto, Selfs...1. Mr. Merryweather; 2, 3. Rev. L. Hird, for Bellerophon and Brooke's Lydia.

Ditto, Pink Flake...1. Mr. Merryweather; 2, 3. Rev. L. Hird, for Ely's Lovely Anne and Martin's Village Maid.

Red-laced Picotee...1, 2, 3. Mr. Hepton, for Sir John Boyne and Lord Brougham.

Purple Picotee...1, 3. Mr. Hepton; 2. Rev. L. Hird, for Bootham's Victoria.

Dahlias, best tray of 24 blooms, open to all England...1. (President's prize), Mr Edwards of Layerthorpe, for Meteor, Wonder, Juno, Duke of Wellington, Eva, Fair Maid of Clifton, Suffolk Hero, Topaz, Monarch, Beauty of the Plain, Lady Dunglass, Triumphant, Essex Rival, Cœur de Lion, Dodd's Mary, Marquis of Lothian, Lady Copley, Thurtell's Lady Flora Hastings, Windsor Rival, Striped Perfection, Unique, Miss Johnson, Duchess of Portland, and Marginatum Superbum;...2. Messrs. Backhouse, of Fishergate, for Rival Granta, Suffolk Hero, Metropolitan Rose, Marquis of Lothian, Ward's Mary, Rienzi, Horwood's Defiance, Marchioness of Lansdowne, Ansell's Unique, Sparry's Beauty of the Plain, Widnall's Argo, Essex Rival, Virgin Queen, Lady Kinnaird, Mackenzie's Perfection, Foster's Eva, Widnall's Ne plus Ultra, Clio, Perfecta, Climax, Dodd's Duke of Wellington, Headley's Perfection, Countess of Pembroke, Foster's Seedling, and Dodd's Grace Darling;...3. Mr. Edwards, for Triumphant, Amato, Lady Buckinghamshire, Cupped Crimson, Exemplary, Variabilis, Rienzi, Beauty of the Plain, Suffolk Hero, Knight's Victory, Sir Walter Scott, Iantha, Fat Boy, Peerless Primrose, Marquis of Lothian, Euterpe, Emulation, Wonder, Hon. Mrs. Fox, Queen of Sarum, Marginatum superbum, Lady Flora Hastings, and Conductor.

Best tray of 18 blooms, open to all England...1. Mr. Edwards, for Triumphant, Miss Johnson, Topaz, Duke of Wellington, Emulation, Essex Rival, Ward's Mary, Suffolk Hero, Dodd's Mary, Marquis of Lothian, Independent, Qnari, Rival Sussex, Lady Dunglass, Marginatum superbum, Beauty of the Plain, Hon. Mrs. Fox, and Lady Buckinghamshire; ...2. Messrs. Backhouse, for Sir Walter Scott, Stone's Yellow Perfection, Sparry's Beauty of the Plain, Marquis of Lothian, Virgin Queen, Miller's Charles the Twelfth, Lady Kinnaird, Suffolk Hero, Metropolitan Rose, Essex Rival, Lindsay's Parolla, Foster's Eva, Rienzi, Miss Scroope, Sussex Rival, Queen of Jesmond, Purple Perfection, and Jones's Francess;...3. Mr Edwards, for Queen of Sarum, Marginatum superbum, Hero of Nottingham, Suffolk Hero, Lady Dunglass, Iantha, Triumphant, Sir Walter Scott, Marquis of Lothian, Wonder, Duke of Wellington, Independent, Exemplar, Beauty of the Plain, Unique, Fair Maid of Clifton, Egyptian King, and Girling's Leonora.

Best tray of 12 blooms, open to Amateurs and Gentlemen's Gardeners only...1. J. Richardson, Esq. Clifton, for Don John, Marquis of Lothian, Sir Wm. Middleton, Virgin Queen, Duchess of Devonshire, Lady Flora Hastings, Egyptian Prince, Mackenzie's Perfection, Lewisham Rival, Ansell's Unique, Lady Kinnaird, and Hylas;...2. Joseph Buckle, Esq. Monkgate, for Reliance, Virgin Queen, Fire Ball, Rienzi, Duke of Wellington, Etonia, Miss Johnston, Unique, Rival Sussex, Lady Kinnaird, Marquis of Lothian, and Lewisham Rival;...3. John Priest, Esq for Middlesex Rival, Unique, Victory, Ne plus Ultra, Dodd's Mary, Miss Johnston, Howard's Defiance, Suffolk Hero, Reliance, Lady Kinnaird, and Rival Sussex.

Best tray of 6 bloom, ditto...1. F. Hill, Esq. South Parade, for Sir Walter Scott, Primrose, Marquis of Lothian, Suffolk Hero, Hon. J. S. Wortley, and Mackenzie's Perfection;... 2. Rev. L. Hird, for Middlesex Rival, Virgin Queen, Suffolk Hero, Marquis of Lothian, Headley's Perfection, and Duchess of Portland;...3. J. Richardson, Esq. for Duchess of Devonshire, Marquis of Lothian, Don John, Hylas, Bowling-green Rival, and Mrs. Newby.

Best Dahlia of any colour...1. Messrs. Backhouse, for Hope; 2. Mr. Edwards, for Beauty of the Plain; 3. Rev. D. R. Currer, for Marquis of Lothian; 4. Mr. Turner, Stonegate, for ditto; 5. Lord Howden, for ditto; 6 H. M. Baines, Esq. for ditto.

Best tray of Roses...1, 3. Mr. Clarkson, Fulford; 2 Lord Howden.

Best of 12 Asters...Mr. Clarkson.

Best tray of 24 Pansies...1. J. Richardson, Esq. for Mulberry, Esther, Belzoni, Star of Cheshunt, Thompson's Victoria, Maid of the Mill, Rainbow, Sarah Jane, Masterpiece, Gains's Climax, Seedling, Purpurea grandiflora, Lady Dartmouth, Beauty of Ealing, Carlo Dolce, The Duke, Hector, Magnum Bonum, Victoria, Amaria, Regina, Sanguinea, Duchess of Marlborough, and Napoleon; 2. Mr. Robinson, Stonegate; 3. Messrs. Backhouse.

Best tray of 12 Pansies...1. J. Richardson, Esq. for Lovegrove's Coronation, Radiata superba, Thompson's Victoria, Belzoni, Seedling, Magnum Bonum, Climax, Mulberry, Large White, Dean of Carlisle, Carlo Dolce, and Masterpiece; 2. Henry Richardson, Esq. for Purpurea, Chimpanzee, Climax, Mulberry, Victoria, Coronation, Beauty of Edmonton, Thompson's Victoria, Lady Heathcote, Mrs. Adams, Masterpiece, and Rainbow.

PLANTS.

Stove Plants...1. Messrs. Backhouse, for Thunbergia aurantiaca; 2. J. Buckle, Esq. for Manetia glabra; 3. Rev. D. R. Currer, for Crassula falcata; 4. Mr. Edwards, Layerthorpe, for Acacia kermesina; 5. Mr. J. Robinson, Stonegate, for Sinningia guttata.

Greenhouse Plants...1, 2, and 3. Messrs. Backhouse, the first the President's prize, for Dipsacus puniceus, Salvia patens, and Siphocamphilus bicolor; 4. Mr. John Robinson, for Clematis Sieboldii; 5. C. Harris, Esq Fulford Grange, for Camellia, double striped.

Ericas...1, 2, and 3. Mr. Edwards, for Juliana, Incarnata, and Incarnata superba.

Balsams...1. Messrs. Backhouse; 2. J. Barber, Esq.; 3. G. Hudson, Esq.

Fuchsias...1 and 2. Messrs. Backhouse, for Fuchsia fulgens and Fuchsia Atkinsonia; 3. G. Hudson, Esq. for Fuchsia fulgens.

on these, to me, interesting subjects. I would gladly be a contributor if I had anything worthy of your notice to present; what I may do in this way, however, will be chiefly in the shape of questions.

As a subscriber and sincere well-wisher to the work, I beg leave to avail myself of the privilege usually allowed to a friend, viz., that of giving advice; and at the same time would respectfully recommend that, in all future details relative to the general subject, whether descriptive or critical, there should be nothing ambiguous or hypercritical, and so plain, that "he who runs may read."

I am led to make this remark from having observed, in your very able exposé of the published report concerning the Royal Gardens of Kew, some assertions which I really do not clearly understand. At page 79 of the Supplement to the July number, is the following passage:—"The species of plants are as old as the creation; and, though Dr. Lindley, somewhere in his multiplicated writings, hints that there is a sort of subnormal or semi-organic matter which lingers on the margin, waiting the wind,—and if the said wind shall blow it landward, it becomes a lichen, but if seaward, lo and behold it is a fucus!"

Now, I would beg to ask, what is the meaning of this passage? Is it possible that Dr. Lindley, or any other botanist, can suppose that organic matter can have extraneous existence? or that any body, whether fluid or solid (however plastic the latter may be), can, under any circumstances of heat, air, or moisture, affecting them, be changed from an unorganic to an organic state?

A little illustration of this passage, from your own pen, will very much oblige me, as well as several others, your readers, who are doubtful about it. TYRO.

From respect to our correspondent, "Tyro," as well as from the importance of the subject to which he alludes, we shall offer one or two short observations upon the "Philosophy of Floriculture."

This is a subject, of the importance of which comparatively few practical florists, whether professional or amateur, seem to be aware; and it is doubtful, considering the great difference among "the Doctors," whether even *they* understand very much about it. Upon every subject, be it what it may, there is only one

truth, or system of truths; so that if there be twenty allegations concerning it, nineteen of them must be erroneous. This, by the way, is the grand cause of error in the theory, or, to express it more correctly, in the generalization of the facts and practice upon matters of all descriptions; for in a book-producing and lecturing age like the present, the expounders of false doctrines exceed the propounders of true by a most overwhelming majority; and what is more, and worse, most people, when they are seeking instruction, swallow falsehood with much more avidity, and retain it more pertinaciously, than they do true doctrine. The reason of this, though simple enough when once stated, is worthy of being mentioned. It is this:—a false system, being entirely the fabrication of its author, is made complete and consistent in all its parts, because the parties framing it have none of those difficulties to contend with which so frequently beset the path of him who is in search of truth. The whole truth upon any subject, and more especially on one so extensive, so complicated, and so very obscure as the physiology of vegetable life, is not known, and cannot possibly be known to the most learned and laborious of the human race. Hence, whether the true theory of any subject be more or less extensive, it is never perfect; on the contrary, it is a fragment: and, indeed, unless it is built up by such a man as we seldom meet with, it is a congeries of disjointed fragments; so that he who seeks to cross the river from the land of ignorance to that of knowledge finds only the piers of a bridge without the arches; and as there is no steam power by which this bourne can be passed, the student can do no more than gaze at the imperfect bridge, and remain in ignorance.

French savans—we dare not say philosophers—used to be, and many of them still are, great manufacturers of pretty but foundationless theories; and, like the spores of those fungi which ride upon the winds, they will sometimes stick to the head of a British philosopher, especially if it is a little soft.

The allusion made to Dr. Lindley, in the number and page alluded to by "Tyro," has very much the air of being, originally, French; although, from the very idiomatic nature of the French language, Dr. Lindley may not have rendered it in its original spirit. Still, even as rendered by him and by others in this country, variously translated and paraphrased, it reaches very nearly to that root of "true no-meaning," which renders the

delightful subject of vegetable physiology a sealed book to most people, and an abomination to the rest. We may, indeed, trace it through every region of the world, and through every period of recorded history. Nor is this much to be wondered at; for as there is no one process in nature, be it the motion of a planet, the germination of a seed, the expansion of a leaf, or the blooming of the tiniest flower, which any human being can wholly understand; and as every one wishes to appear as wise as possible, each one fancies a "something" to help him through the difficulty, and make him at least believe that he understands the whole.

When the Almighty clothed the earth with vegetation, He made every species after its *kind, with its seed in itself;* and this will remain true until the days of our earth shall be numbered; and these six words, simple as they appear, contain the very essence of vegetable physiology. We have all the species created, "each after its kind," and this puts us in possession of one generation of the entire race of vegetables. Again, the seed of every species is "in itself," and this involves the succession of generations. Therefore, every true species of vegetable is a distinct portion of creation; and there is no means of continuing the species except by those energies which are in itself, and not derivable from any other source.

From inattention to this, the classifiers of plants have made sad work with the species; for, as was justly remarked by Mr. Don, in our October number, varieties and species are often confounded with each other, and an endless jumble of confusion occurs. Now, the distinction of species is as clear as possibly can be:—if two plants, however unlike each other in several of their characters, produce a fertile progeny by hybridization, they are merely varieties; but if the hybrid is barren, they are distinct species. Plants are, however, so obedient, both to differences of natural circumstances and to changes brought about by human art, that it is extremely difficult to say what is a species according to the theory; for the same species may be so altered by differences of climate and treatment, that their progeny will not be fertile; and the reverse of this may also hold true. In no case, however, have we the means of getting a single plant, except out of the species to which it belongs; and though observation and experience have taught us how to treat cultivated plants so as to produce the intended effect, they have thrown no light upon the

immediate energy of vegetable life by which that effect is produced. We can fatten plants for our tables as well as animals; and we can vary their forms and increase the beauty of their flowers, and also vary and prolong their times of flowering for the ornamenting our parterres and conservatories; but, still, we are merely trainers of the plants; and when their power of vegetable action ceases we can do nothing.

It is this action which constitutes vegetable life; and we are not aware of any one inorganic substance which is better fitted than another for furnishing the substance of a plant, taking the whole range of the vegetable kingdom. We find them in all situations, from fathoms deep in the ocean to the naked rock and the burning sand, on the last of which, water-melons, among others, grow most splendidly to an immense size, and are exceedingly cooling to the sojourners in the wilderness. But, in all these cases, and in every case that can be imagined, there is nothing but the plant and the rest of nature around it. It is admirably fitted to its situation, no doubt; but, still, there is nothing save the plant itself and the circumstances of its situation.

Now, the life of a plant is not material, not even the rarest vapour that ever was produced; and of its action in the individual, from the time that the germ is visible to the microscope, to its final death, we know neither the beginning nor the end. We see its working, or rather the result of its working, and if we cultivate the plant we can make it work differently,—but the life, the energy which works is perfectly inscrutable.

Our common notions of the working of men always mislead us when we come to treat of the workings of nature; because in such cases we see both the workmen and the materials; whereas, in the case of a plant, we see neither the one nor the other. There is this further difference, that a man cannot elaborate the materials with which he works—cannot for instance make a single grain more of earth in a garden by merely digging at it; but the vegetables which he plants in it, increase their quantity of matter according to their kind, and the circumstances in which they are placed.

The confounding of these is the real cause of all the misapprehension and want of meaning which are to be found in the *fancied* theories of botanical writers: they *will* have a third something; and as this something does not exist as a substance, it is utterly

impossible to speak the truth concerning it when taken in that point of view. The relation of the plant, that is, of the living principle in the plant, to the circumstances under which that principle acts, is the immediate cause of the misleading; for it is merely a *relation*, and they consider it as a thing.

The knowledge of this relation is the very basis of all culture, whether of flowers or of any thing else; and there is no way of obtaining it originally, but by observation and experiment; and when a fact is established by this means, it becomes one portion of that which, when generalized aright, is true theory.

The successful cultivator of common field vegetables requires to study the influence of many circumstances, upon even his limited variety of plants; but they are nothing compared to those required by a floriculturist. He may be said to cultivate all the quarters of the world, and this often in a very limited space; and though his chief object be to obtain healthy and handsome plants and beautiful flowers, before he can do this rightly, he must know something of the circumstances of plants in all places of the globe. This study may be separated into many branches, each of great importance, and yet all so related to each other that they must be generalized, and their effects upon the plant understood, by every one who aspires to be a general florist. The principal ones are situations, height above the mean level, soil, aspect, characters of the proximate lands or seas, temperature, humidity, and seasonal changes; and though some of these are so broad that it is difficult to generalize them, yet they must be studied. In studying these, the habits of the particular species of plant, as agreeing with its constitution and growth, are chiefly deduced from those branches of the subject; and when the necessary practice is added, the florist may be said to be prepared for the simple culture of plants, of whatever country they may happen to be natives. He has still one other advance to make, that of improving the plants; and though this be very much a matter of experiment, those branches of knowledge which we have named will serve to guide him in his experiments. A knowledge of the powers of the principle of life, which differ in different plants, is also a matter of great importance, for many growers often kill their best plants by kindness. But, it must always be remembered that this principle of life is not a substance, which can exist apart from the living plant, and that therefore its

nature in any one species must be ascertained by observing its progress under different modes of treatment, and following out that mode which is found to answer the best.

We have made these remarks quite general, and expressed them as plainly as possible; but when the bloom of the year is over, we shall in all probability take up a few of them, and treat them more at length. In the meantime we continue to invite all "Tyros" to question us as much and as often as they please, for though we may not be able to solve their difficulties, we shall get some of our cooperators to do it efficiently.

EXPERIMENT ON THE GLOXINIA.

TO THE EDITOR OF THE FLORIST'S JOURNAL.

SIR,—I beg to call the attention of your readers to the following experiment on the Gloxinia, which fully proves that though certain stated rules may be good under general circumstances, yet we may be sometimes justified in departing from those rules, however generally approved; and also how thoroughly necessary it is that every cultivator should exercise his own judgment and abilities, not only towards the maintenance but the improvement of his charge.

The Gloxinia, in the natural arrangement, occupies a place in the order Angiospermia; and in the Linnean, Didynamia Gymnospermia. The treatment usually applied to this plant is the same as that of other bulbous-rooted stove plants, namely, a season of growth and a season of rest: this rule, though good in a general sense, may, in this instance, be safely laid aside. The method by which I have been enabled to grow this beautiful plant to great perfection is this: as soon as the plant has completed its summer's growth, which is usually about August, instead of the old method of drying it off, I immediately repot it in very sandy peat, with a good drainage; place it in a warm part of the stove, keeping it moderately watered all winter, by which means I gain an additional season of growth; in fact, the plant continues to grow the whole year through, and this without weakening or causing any injury to the plant. In February I repot it again,

using a much stronger mixture than before, say a third part peat, ditto strong fresh loam, ditto vegetable mould: in this mixture they will immediately commence a very luxuriant growth, and in a short time produce the bloom, which I have invariably found to be much stronger and more abundant than when suffered to pass the whole winter in what may be not unaptly termed idleness.

And I may yet mention another instance in which the usual mode may be deserted, with infinite advantage to that well-known plant, the Fuchsia Fulgens, which, as all gardeners are aware, is a tuberous-rooted plant, and a most magnificent plant it is when properly grown; but yet very frequently we hear a very great complaint of its long-necked stems: these may be entirely eradicated by a departure from the "stated rules." Instead of treating it as a greenhouse-shrub, it should be treated as what indeed it actually is—a tuberous-rooted plant. My manner is this:—when the plant has done blooming, cut it down close to the earth; then dry the roots in the same manner as the dahlia, and early in February repot them, and plunge them in a warm bark bed; they will soon push out a great many shoots; thin them out to about five or six, and, as the plant grows, keep it constantly shifted into a larger pot, using a stronger compost at each shift. I constantly keep it in a bottom heat till the flowers appear, then remove it by degrees into the greenhouse; in this manner I have had plants five feet high, with the foliage down to the rim of the pot, and that of no ordinary description. On an average, each leaf was nine inches long, and five across, and the flowers generally about thirty or forty in each raceme.

In conclusion, I cannot help remarking, the science of horticulture is of such an indefinite nature, that, although very much has been written, there is always room for some fresh remark; and for this no work is so well adapted as the Florist's Journal, in which, by your kind invitation, we may all in a friendly manner make known our little improvements and errors; and, I think, those who wish well to horticulture cannot be backward in so doing.

AMICUS.

ON THE ARRANGEMENT OF ORNAMENTAL PLANTS.

In order to give to a collection of such plants the power of imparting all the pleasure and instruction of which it is so capable, no small portion of the cultivator's art lies in the arrangement of the plants, both in such juxtaposition as to produce striking and yet not harsh contrasts, and in giving the spot on which they are grown, as much the air of their native locality as possible. If this were properly done, collections of ornamental plants might be converted, as far as vegetation is concerned—and that is a great way—into a sort of maps; far more delightful, and, we may add, far more instructive, than those of the ordinary construction. They would not, indeed, supersede the use of these, but they would extend it very profitably and very delightfully, and would give a new charm to the floral art, all charming as it is even in its most humble and simple modes.

To accomplish this, in the way that it ought to be done, would be a very expensive matter, not within the reach of common florists, and inconsistent with the views of professional men, who grow flowers for sale, or of amateurs, who grow them for exhibition. The foremost men, in the most wealthy and influential class, many of whom are ardent admirers of, and great connoisseurs in, ornamental plants of all kinds, and spend very large sums upon this the most pure and delightful of all their luxuries; some of *them*, we say, might do much in this way without any great increase of expenditure. Besides this, if the establishment at Kew were made national, which it is not, and but half as well supported as many other things which have not the tithe of its importance, either in a moral or an intellectual point of view, much more might be done there for the pleasure and advantage of the public, than at the mansion of the most wealthy nobleman in the land. Whether it be that legislators have a peculiar fondness for laws, because these are their own progeny, we pretend not to divine; but certain it is, that more attention is paid to laws which will not work till they are patched and turned again and again, and which after all do not work to any useful purpose, than to those incitements to more refined tastes, and consequently to purer morality, which would not fail to save a great deal of trouble and expense in law, besides being highly beneficial to the tone, character, and

industry of the country. As humble florists, it is not our business to enter into the governmental or the popular causes of that strange neglect which, notwithstanding all the wealth and intelligence of this country, is the fate—the public fate, we mean—of every thing calculated to refine the mind, soften the heart, and tend to root out those vices of coarse and vulgar character which are still too prevalent. But, in perfect accordance with our proper studies, we shall from time to time "keep at them," as the vulgar but expressive phrase has it; and, while we devote our main attention to that art of which we are willing advocates, if we can obliquely aim a shaft in favour of any of the sister arts, we shall not let slip the opportunity.

But we must advert to our immediate subject, which is to recommend the arrangement of foreign plants in such a way as that they may afford at least some idea of the scenery of those lands of which they are native. Preparatory to this, it would be desirable to provide also a knowledge of the form of the surface and the nature of the soil where the plants are native; and it might not be unadvisable to intersperse some of the accompaniments, such as models of a few of the animals which are most strikingly characteristic of the scenery. For the accomplishment of this, extensive space, though desirable, is not absolutely necessary; because a limited scene, if perfectly true in its characters, affords an easier and perhaps a more useful lesson than one of very ample dimensions, in which those peculiarities that more particularly express the locality, are lost in the extended mass of the whole.

In the open air, arrangements of this description would be of course confined to climates not much warmer on the whole than that of the place where the collection was to be established: and if the native locality of the plants were very seasonal in respect of drought and humidity, they would either not thrive, or their characters would be altered in the variable climate of Britain. But even for out-door collections, if the places for them were judiciously chosen, the range is much greater than some would suppose; for it includes the plants of the elevated parts of China and Japan, of the Illawarra district of Australia, of those slopes of the Mexican and Peruvian Andes which have considerable elevation, and are subject to frequent rains. Thus there is an ample field for geographical display in the garden, the shrubbery, and the arboretum,—though that which we should desire to see would be all

these blended together, by which means nature would be followed; and the more lofty trees, entwined by their climbers, interspersed and shaded off to the glades and other openings, by shrubs and the herbaceous and ground plants: the whole mass, gay in its variety of flowers, would be exceedingly beautiful. Then, during the summer, some of the brightly-tinted birds of warmer climes, secured, if necessary, in invisible wire cages, would greatly heighten the effect. We believe that some, indeed a considerable number of the vegetable productions of the Tierra Frio of Brazil, would stand the English winter; and to these, several species of maccaw, which are easily taught not to range, would give all the gaiety of living flowers.

This may seem to have no immediate connexion with the culture of florist's flowers, or the advancement of the merely floral art; but it ought to be borne in mind that this art is only a single department of the more general art of cultivation for the purposes of beauty; and that it is not possible to improve any one branch of a general art, without stimulating, and even assisting all the others.

Let us take a single example in illustration of the general principle which we are advocating; and as it can be best done there, let us take it in that which may be considered the highest department of indoor culture,—the stove. In order to carry out the plan, the stove would have to be of more ample extent and far greater height than any of those now in use; and it would not be available for those who grow plants for sale, because they must bring every longitude of the intertropical zone within the walls of the same structure, in order that they may please every customer. Such a collection, if ample enough, well selected, and treated with first-rate skill, may be exquisitely beautiful in its individual plants, and not only striking, but absolutely startling from its contrasts; but notwithstanding this, which we freely admit is the very best plan for the mercantile breeder, there is no keeping and congruity in the very best of such houses, taken as a whole. The beauty, even when it is the most exquisite in the individual plants—say in the choicest *Orchidaceæ* in full bloom, is still only prettiness, because one cannot so generalize it, as to bring it up to that point which inspires the most delightful intellectual feeling of beauty.

If however each orchidaceous plant were on its native living

tree, or its appropriate sod, and if there were the other flowering plants, interspersed with little pools of water, and all the other accompaniments, we should have at least a taste of the scenery in a tropical season of bloom. In order to accomplish this, the plants, of whatever kind, would all have to be brought from the same locality; but this would reduce the treatment to the simplest matter imaginable, because the attendants on the house would have only to learn the characters of the seasons in the native locality, and imitate them as closely as possible.

We throw out these observations merely as hints; but we think the plan an important one, and therefore we respectfully call attention to it, and shall be glad to receive the opinions of others—and the more freely these are expressed the better.

ON THE CULTIVATION OF CATTLEYA.

BY MR. P. N. DON.

CATTLEYA, though not a very natural genus, is a most splendid one, and thus claims the greatest attention from the cultivator of the lovely tribe of orchidaceous plants. The best mode of treatment is to grow the plants in very large pots, and to have the pots filled up to within about two inches of the top with very large potsherds; so that when the roots get through the peat they may have free scope to grow; and by this means also the water gets off more freely than if they were potted with small potsherds. Over the potsherds should be laid the heathy portion of the peat, or the roots of the common *pteris*, or eagle fern, cut into lengths, as this will make an excellent drainage, and prevent any of the smaller portions of the peat from getting among the potsherds. The peat in which Cattleya are potted should be of the most fibrous nature, as much so as that recommended for Stanhopea, in the October number of this work. The mounds on which they are placed may be from four to six inches in height, with the base about the width of the pot; and it should narrow toward the top, but not too much, the proper form being that of a sort of conoid. The plants are very adverse to any water lying about their roots, or, I should rather have said, about the bases of their pseudo-bulbs, the roots

being so very fleshy that the least damp lying about them will destroy them, and prevent the plant from getting firmly fixed to its destined spot; and if they cannot do this there is no chance of their ever attaining perfection in their growth. Some parties recommend that small potsherds should be put along with the peat; but against this I strongly protest, as being injurious to the health of the plants. In the first place, it prevents the roots from going forward, and very often destroys them altogether; and, in the second place, it accumulates a great deal of unnecessary moisture, which is sure to destroy the roots as soon as they come in contact with it. In no case where potsherds have been mixed with the peat have I seen the roots healthy or of any length; but, on the contrary, they invariably appeared black and stunted, and never had a firm hold in their situations. Whereas, when potted in fibrous peat they are long and healthy; and when they get through the peat they commence taking hold of the large potsherds, or they attach themselves to the sides of the pot: by this means they get firmly established, and so attain much greater perfection in their growth than they otherwise would do, even with the best after treatment.

The best time for potting is the growing season; because then the plants are about to make new roots; and as the old roots are of little use to the plant after it is moved, the greatest care should be taken not to injure the young ones, because these are the only means by which the plant can be fixed to the place of its growth. As soon as the plant has done growing, and when its pseudo-bulbs have attained their full size, it should be allowed to go to rest; that is, it should have little or no water until it again shows signs of growth, which will be evinced by the buds beginning to burst. Immediately after this the plant should have a small portion of water, and it should be increased as the buds develope themselves. When they get into a strong state of growth, they should have plenty of moisture; for if they have not water at this time, or if only a scanty supply, the pseudo-bulbs will be small and feeble; and the flowers will also be small; and most likely the plant will not be able to perfect any flower whatsoever. Cattleya should, by all means, have their flowers developed and grown in a strong moist peat, because then they will be of much larger size than if they were developed in dry peat. When, however, the flowers are developed, the plants should be instantly taken to the dry

house, because there their flowers will last much longer, and be much finer in their colours. I have seen several of them flowered in the common stove; but I never saw any flowered there of which the blooms were so large and fine as those grown in the way I have recommended.

Different species of Cattleya have different times of flowering. Some of them flower early in the season, and before they begin to grow; but by far the greater number flower after they have completed their pseudo-bulbs. Indeed, they all, of course, complete these pseudo-bulbs before they flower; only, the early ones alluded to take rest between the formation of the bulbs and the flowering: whereas, the others continue the one growth immediately after the other. If there is a rest between the bulbing and the flowering, it indicates that the plant has a double season in its native locality; that is, that there is a second or returning rain: whereas, if both flowering and bulbing are continued without any pause, it indicates that there is only a single rainy season in the native locality. Thus, those curious plants of peculiar regions afford us no little insight into natural geography, if we only study them aright. This holds true, not of plants only, but of all natural subjects; and if we study nature aright, the one part of it is always the best interpreter of the others.

Although I have recommended pots and peat as the most advisable for growing the Cattleya, yet there are many of the species that may be grown very fine on suspended pieces of wood, or even in baskets, with *sphagnum*, or common bog moss. But if grown either of those ways, much more attention requires to be paid to watering than when they are grown in pots. This is one reason why I have recommended pot cultivation as the general mode of treatment. There are, however, other reasons, which the habits of the plants themselves suggest. Billets or baskets answer remarkably well for orchidaceæ with downward or drooping flowers, because such show best when the eye is below them. But the Cattleyas are all upward flowerers; and if they are suspended so as to be above the eye, they cannot be seen to advantage unless taken down for the express purpose; and this, besides the trouble which it occasions, is in some danger of damaging the plants. If in pots, one can place them in any situation that is most desirable, and thus derive the full enjoyment of their beauties without any risk of doing them injury. Such is the general mode of treating

these choice and delightful flowers; at least, the most advisable one, both with regard to their growth and the beauty of their flowering; at least, in so far as my observation and experience are concerned. I shall now give a brief enumeration of the principal species which are in cultivation in this country.

Cattleya Forbesii.—This is a very pretty species, and, I believe, one of the first introduced into this country. The flowers are straw-coloured, with a mixture of white on the lip. It is one of the species with two leaves and elongated pseudo-bulbs. With us, it begins to grow in March, and continues to grow and flower till October. After this, it rests or reposes; and when this occurs, no water is required until the season of growth again comes round, and vegetation is renewed. When the renewed action appears, water should be given sparingly for a week or two at the first, and gradually increased in proportion as the growth becomes more vigorous. It is much better grown in a pot than either in wood or in a basket. It is a native of Brazil.

Cattleya Harrisonii.—Until lately, this was looked upon by many as only a variety of *Loddigesii*—a species afterwards to be noticed—which, however, is incorrect; for it is not only a distinct, but a well-marked, species. Like the *Forbesii*, it has two leaves and elongated pseudo-bulbs. The flowers are of a beautiful violet colour, having the violet on the lip intermixed with white and yellow. It is a strikingly beautiful species, and ought to form part of every collection of orchidaceæ, how small soever. Different from *Forbesii*, the sepals and petals of this species stand out from the lip, on the same plane, and surrounding it. Like *Forbesii*, this species does best in a pot, with peat; and altogether requires much the same treatment as that one. Naturally, it grows upon trees, and is found in Brazil and other parts of intertropical America.

Cattleya Loddigesii is another fine species, with two leaves and elongated pseudo-bulbs. It is found, native, upon trees in various tropical parts of South America. The flowers are of an exquisitely delicate lilac colour, different from *Harrisonii;* the sepals and petals are bent back from the lip, and the lip itself is curved downwards, which gives the whole flower an exceedingly pretty appearance. It rarely makes more than one pseudo-bulb in the course of the season; and, generally speaking, it flowers from the beginning of September to the end of October. Care should be

taken not to stimulate it into growth earlier than May; because, if it is brought into action before then, it is very apt to produce too weak shoots, which either do not flower at all, or, if they do, the blooms are insignificant in size and inferior in colour. After it has made one shoot, great care should be taken not to start it, so as to make another; as the single shoot is the only way of getting it to flower in full perfection. It requires to be potted in the same manner as the species previously mentioned.

Cattleya Guttata.—This is a native of Brazil, and other parts of South America. It is a true and well-marked species, with two leaves and elongated pseudo-bulbs. It is a lovely plant. The sepals and petals are greenish yellow, spotted with dark brown, and the lip is pinkish yellow mixed with white. Its flowering season is the autumn. It should not be allowed to come into action before the end of April; and it should not be allowed to make more than one shoot in the season; that is, not more than one from each pseudo-bulb. If it is allowed to make more, the flowering will be inferior, and the health of the plant will suffer. The best mode of treating it is to pot it in the same way as has been recommended for the others.

Cattleya Skinnerii.—This species is a native of Mexico; was introduced into Britain about five years since; and its first flowering in this country was four years ago. It is one of the most beautiful of the two-leaved species with which I am acquainted. There are two pretty distinct varieties of it; the one with light pink flowers, and the other with dark pink; but they are both very handsome, and well worthy the utmost attention of cultivators. The column is very small, and the lip so rolled round it, that the column itself is rarely seen; thus, its flower has not much the appearance of that of a Cattleya, being more like those of *Tricopelia tortalis;* but, notwithstanding this, it is a true Cattleya in its habit. If it is to be flowered in perfection, it ought not to be allowed to make more than one shoot; neither should it be stimulated into growth before May. It flowers at the beginning of the season, and not at the end, as was mentioned by some of the others. It answers best in a pot, and requires a good dry rest after it has perfected its pseudo-bulbs. From this it will be seen that there is a climatal or seasonal distinction between it and those previously mentioned; and this agrees with the fact of its being a native of a different part of America.

Cattleya aurantica.—This is the *Epidendum aurantium* of some botanists; but I can see nothing to distinguish it from Cattleya, except the smallness of its flowers. In appearance and habit it is, unquestionably, a Cattleya; and these are the essential points. Though the flowers are small, it is a very pretty species. The flower has much the appearance of a star, and is of an orange colour, darker on the lip than on the sepals and petals. It only makes one shoot in the course of the season, at the beginning of which it comes into flower, and forms its pseudo-bulbs afterwards. When these two consecutive operations of growth are over, it requires to be well rested; and the whole treatment of it is very much the same as that of the species immediately preceding.

Cattleya bicolor is a handsome little species, not growing to the height of above four or five inches. It is found on the sea-coast of Brazil. It bears only one flower, which is nearly as large as all the rest of the plant. When young, the leaves and stem are very prettily spotted with purple; which, however, wears off as they come to maturity. It belongs to the two-leaved branch of the genus; makes but one shoot in the year; is best grown in a pot; and should be well rested after the season of action is over. It is a rare species.

Cattleya adoratissimo is very like *Loddigesii* in its general habit, but quite different in its flowers: these are larger, of a richer colour, and have a very agreeable scent, resembling that of the Russian violet, only a good deal stronger. It is a native of Demerara, and was introduced into this country by Mr. Schomburgh. It is still scarce; it makes but one shoot in the year; flowers soon after completing its pseudo-bulbs; and requires a good rest after flowering.

Cattleya crispa.—This species belongs to the single-leaved portion of the genus, which have thick, short pseudo-bulbs. When properly grown, it is a very lovely plant. The sepals and petals are whitish pink; and the lip is crisped, and beautifully marked with crimson. Its flowering season is at the beginning of the time of growth, which is in June and July; and the growth of the pseudo-bulbs begins in August. When these are complete, it requires a good rest. It sometimes makes two shoots in the course of the season; but when it does so, the first shoot rarely flowers; or, if it does, there are only one or two blooms, and these not handsome. Pot culture is best suited for it.

Cattleya Mossæ is another of the single-leaved and thick-bulbed species. It is a handsome plant, ranking next to Labiata, but is inferior to that species. The sepals and petals are pinkish red, and the lip is finely marked with white, yellow, and deep pink. It is best cultivated in a pot. It is a native of South America; flowers immediately upon completing its pseudo-bulbs; and sometimes makes two shoots, and flowers twice in the same season; that is, in the course of the same year.

Cattleya Perrinii.—This is a most splendid species, and deserves to be cultivated with the greatest zeal and attention. It is the *Lælia Perrinii* of some botanists; but it has all the characters of the one-leaved species of Cattleya. The only thing, indeed, that distinguishes Lælia from Cattleya, is the different number of the pollen mosses: and so far as my observation goes, this does not appear to be constant. My opinion is, that when a plant of this tribe agrees with a certain genus in its outward and general form, no notice should be taken of the minute parts of the flowers, unless for the purpose of particular or individual distinction. The plant under notice flowers in the autumn, after having completed its pseudo-bulbs; but it does not begin to act till late in the spring, and produces only one shoot in the year. It answers best in a pot; and should be well rested after the flowering is over.

Cattleya citrina.—I have never seen this species in flower; but it has flowered in this country, and is represented as being very beautiful. It is so unlike Cattleya, and so like Lælia, that it should go along with the round pseudo-bulbed section of that genus. The leaves and pseudo bulbs are of whitish green colour. It is a native of Mexico, and answers very well upon wood. We have it here, in Messrs. Rollisson's nursery, in fine healthy condition, and coming into flower, so that I can give a note of the flower when it makes its appearance.

Cattleya Labiata.—This, though the last that I shall enumerate, is by no means the least; on the contrary, it is the most noble and graceful of all the species that have yet flowered in this country. It has the largest flowers, and, at the same time, the richest colours. The petals are an exceedingly delicate pink; the sepals brighter; and the lip, which is large, is of the richest crimson; with several intermediate colours, which give it a noble appearance. But it is impossible to convey, in words, any idea of the

beauty of this flower, which is equally rich and delicate ; but it is intended to figure it in an early number of the " Florist's Journal." It makes only one pseudo-bulb in the course of the season, and flowers soon after its completion. The time of flowering is in October ; and when the flowering is over, it rests till about May. A pot is the proper station for it ; and when a large and well-grown plant is in flower, there is hardly an inmate of the stove which can compete with it in beauty. It is a native of Brazil, and of other parts of South America. There are several species which have not yet flowered in this country, but which will, I have no doubt, be very beautiful : *C. gigantea*, which has not yet been introduced here, is said to be the most splendid of the whole ; fine as many of the rest are.

Tooting Nursery,
Oct. 22, 1840.

ON THE ALPINIA NUTANS.

BY MR. JAMES MAIN.

This beautiful exotic was introduced into our collections as long ago as 1789 ; and, from the shape of its leaves and stems, was supposed to be an amonum. It was nearly ten years in this country before it was brought to flower ; but at last it was flowered by Mr. Grimwood, at Kensington, and Mr. Colvill, at Chelsea, nearly about the same time.

As the blossoms are remarkable in form, beautifully coloured, and large in size, the young plants were readily sold, and extensively circulated ; so that there are but few stove collections at present, in which the plant is not to be met with.

It was not till some time after it flowered in England, that botanists were agreed about its name ; in fact, it bore several names, until at last it was described and named by Mr. Roscoe.

Although the plant is not at all rare, it is seldom seen in flower, which is owing, perhaps, to its not being generally known that it is a *half aquatic*. In its native country, the southern provinces of China and India, it is invariably seen growing on the sides of the ponds, in gardens, or on the banks of canals in the open

country. In those situations, and in rich alluvial soil, the stems rise to the height of six or eight feet, and the nodding spikes of flowers are magnificent.

From these circumstances, I should conceive that the readiest way of flowering this plant would be to keep it rather dry throughout the depth of winter; and about the first of February, shift it into a large pot, a sixteenth size at least, and in a compost of strong loam well enriched with rotten dung; then plunge in a brisk bark-bed heat to prompt a vigorous growth by daily supplies of tepid water. Or if planted in a trunk, in the corner of a bark bed, the plant would have a good chance to perfect its flowers.

Our plant belongs to the first class and first order of sexual botany; and to the natural order *Scitamineæ*, and is easily propagated by division of the root.

It is hardly necessary to add, that there are many other stove plants which seldom or never flower under the ordinary stove management; but which are well worth a little extra labour to bring them into flower, and particularly several genera belonging to the same natural order to which the alpinia does.

Queen's Elms.

CALENDAR FOR NOVEMBER.

STOVE.—Little remains to be done in this department after repotting, &c. besides the regular routine of watering, attending to fires, and so forth. A little fresh air is beneficial at this season, if it can be given without lowering the temperature of the house too much; the average of which should be about sixty-five degrees. Keep the house clean, and the plants neat.

GREENHOUSE.—On dry open days as much air as possible should be given; and after three or four wet days, even though the weather is warm, a little fire is necessary to expel damp: keep the house on an average at about forty-five to fifty degrees. Some more chrysanthemums may now be brought in to keep up a succession of flowers. Should any of the Eucas, or other New Holland plants, appear to be infected with mildew, strew a little sulphur on the parts, and stand them in a dry part of the house. Fumigate once or twice in the course of the month. Oranges, camellias, &c., should have their leaves and stems washed with clean water and soap.

FLOWER GARDEN.

Auriculas will require a great deal of attention; now protect them from rains and drip; pick off dead leaves, and water them sparingly.

Pot flowering shrubs for forcing. Roses, tulips, hyacinths, and other bulbs intended for early forcing, should be placed in a pit or frame. A few ranunculas and anemones may be planted for an early bloom. Carnations must be put into winter quarters; for these a frame open at the sides, or, in other words, the lights placed on poles a little above a stage on which the plants are to be placed, will be found the best protection, as these plants require only to be kept from the wet. Protect tender shrubs. Let the borders be neatly dug; and, where it is required, lay on a coating of manure. Finish planting, &c.

FLORAL INTELLIGENCE.

Sept. 18. HALSTED AND NORTH ESSEX FLORAL AND HORTICULTURAL SOCIETY. Prizes awarded:—

DAHLIAS.

1. R. Marriott Esq. for Sarah, Springfield Major, Rienzi, Lady Kinnaird, Topaz, Penelope, Eva, Advancer, Miss Scroope, Royal Standard, Bowman's Premier, Duke of Wellington, Trigestre Rival, Horwood's Defiance, Ovid, Ellen of Eton, Grant Thorburn, Heroine, Danecroft Rival, Trafalgar, Suffolk Hero, Cambridge Hero, Ansell's Unique, Triumphant, Duchess of Devon, Marquis of Lothian, Climax, Francis, Invincible, Diomede, Landmark, Lewisham Rival, Hope, Bowling Green Rival, Contender, Lilac Perfection, Miss Johnson, Purple Perfection, Yellow Defiance, Emulation, Duchess of Portland, Amato, Conductor, Argo, Hylas, Grace Darling, Virgin Queen, Lady E. Bruce; 2. Mr. W. Root, for Dodd's Mary, Springfield Rival, Essex Rival, Suffolk Hero, Lady Dartmouth, Lewisham Rival, Argo, Lady Powlett, Hyperian, Sarah, Monarch, Rhoda, Marquis of Lothian, Formosa, Norval, Squibb's P. Perfection, Julia, Knight's Victory, Warminster Rival, Bride of Abydos, Virgin Queen, Coronation, Elphinstone's P. Perfection, Shakespeare, Lord Derby, Unique, Rival Purple, Sir J. Ashley, Duchess of Devon, Sir R. Lopez, Miss Johnson, Ansell's Constance, Wallace, Climax, King Otho, Ruby.

Best 12 Dahlias...1. R. Marriott Esq. for Duchess of Portland, Fire Ball, Conductor, Rienzi, Penelope, Unique, Advancer, Chef-d'œuvre, Lewisham Rival, Tanthe, President of the West, Marquis of Lothian; 2. A. T. Canning Esq. for Lady Kinnaird, Conductor, Fire Ball, Bontishall, Duchess of Devon, Unique, Springfield Rival, Eva, Sarah, Lady Powlett, Horwood's Defiance, Essex Rival.

Best Seedling of 1840...R. Marriott, Esq. Yellow, not named.

Best 12 Asters...1. Mr. W. Root; 2. Rev. Dr. Burney.

Best Bouquet...1. Mr. W. Root; 2. Rev. J. Sperling; 3. P. F. Martin, Esq.

Extra Prize Design for Flower Garden, Mr. R. Plant, (Gardener to E. May, Esq.)

COTTAGERS' PRIZES.

Collection of Flowers, W. Knight.

Sept. 22. ROCHESTER AND CHATHAM HORTICULTURAL SOCIETY. Subscribers' Prizes.

First Class, for Gentlemen whose Gardens are under the care of a professed Gardener.

Best 12 Dahlias (selfs), A. Wigan Esq. Essex Rival, Contender, Topaz, Suffolk Hero, Conqueror, Hope, Wallace, Fireball, Primrose, Model of Perfection, (Syred's), Victory, Lewisham Rival.

Second Best 12 Dahlias, (selfs), Rev. Dr. Page, Ne plus ultra, Essex Rival, Grace Darling, Amato, Suffolk Hero, Victory, (Knight's), Fire Ball, Springfield Rival, Conductor, Climax, Ruby, (Girling's), Purple Perfection, (Squibb's).

Best 12 Dahlias, (variegated.) A. Wigan, Esq. Unique, Beauty of West Riding, Beauty of Clare, (Syred's), Duchess of Richmond, Sir Wm. Middleton, Lady Dartmouth, Lady Sondes, Eva, Elizabeth, Julia (Clark's), Lady Wetherell, Clarissa.

Second 12 Dahlias (variegated), Rev. Dr. Page, Francis (Jones), Countess of Torrington, Oxford Rival, Rienzi, Lady Unique, Eva, Lady Dartmouth, Fair Maid of Clifton, Miss Masters, Queen of Sarum, Alfred (Harris.)

Best Single Specimen of any sort in Pot...A. Wigan, Esq. Bletia Tankervillia.

Second ditto ditto...Rev. Dr. Page, Penstemon gentianoides coccinea.

Best 18 Cut Flowers...A. Wigan, Esq.

Second ditto ditto...W. Nicholson, Esq.

Third ditto ditto...Rev. Dr. Page.

Best 3 Balsams...Sir W. Warre.

Best 12 African Marigolds...D. H. Day, Esq.

Best 12 French ditto...Sir W. Warre.

Best 12 German Asters...Ditto.

Best Salvia in Pot...Mrs. Winthrop (patent).

Best 3 Petunias...W. Nicholson, Esq.

Best Fuchsia in Pot...A. Wigan, Esq. (Fulgens).

Best 3 Stove or Greenhouse Plants...A. Wigan, Esq. Abutilon Striatum, Manettia glabra, Russelia juncea.

Best Second ditto ditto...W. Nicholson, Esq.

Best Bouquet...Miss S. Nicholson.

Subscribers' Prizes—Second class, for Gentlemen whose Gardens are not under the care of a professed Gardener.

Best 12 Dahlias...Mr. Langley, Ne plus ultra, Conqueror of Europe, Grace Darling, Amato, Essex Rival, Lord Byron, Sir Hy. Fletcher, Suffolk Hero, Hylas, Unique, Victory (Knight's), Rienzi.

Second 12 Dahlias...Rev. J. P. Alcock, Marquis of Lothian, Conqueror of Europe, Suffolk Hero, Primrose (Gaines'), Beauty of Hyde Vale, Lord Brecknock (Bennett's), Lady Georgiana Pratt (Bennett's), Victory (Knight's), Fire Ball, Beauty of West Riding, Springfield Rival, Royal Standard.

Third 12 Dahlias...Mr Hull, Invincible, Hope, Victory (Knight's), Duchess of Kent (Mitchell's), Birmingham Victor, Queen Victoria (Gaines'), Clarissa, Rienzi, Rival Sussex, Calliope, Lady Paulett, Censor.

Fourth 12 Dahlias...Mr. C. Bathurst, Lady Middleton, Argo (Wednall's), Climax, Lord Sondes, Grace Darling, Essex Rival, Virgin Queen, Washington, Model of Perfection (Syred's), Duchess of Richmond, Rosa (Mountjoy's), Suffolk Hero.

Best Single Specimen of any sort in Pot...Mr. T. S. King, Gesneria bulbosa.

Second ditto ditto...Mr. C. Bathurst, Larochea falcata.

Best 12 Varieties of Cut Flowers...Mr. C. Bathurst.

Second ditto ditto...Mr. P. W. Jacob

Third ditto ditto...Rev. J. P. Alcock.

Best 3 Balsams...Mr. Lamb.

Best 12 African Marigolds...Mr. Caddell.

Best 12 French ditto...Mrs. C. M. Simmons.

Best 12 German Asters...Captain Baker.

Best Salvia in Pot...Mr. T. S. King.

Best 3 Annuals in Pot...Thunbergia abata, Thunbergia abata alba, Datura fastuosa violacea, Mr. C. Bathurst.

Best 24 Heartsease...Mr. Langley.

Second ditto ditto...Miss Boyhurst.

Best 3 Stove or Greenhouse plants...Siphocampylos bicolor, Salvia patens, Loasa aurantiaca, Mr. C. Bathurst.

Second ditto ditto...Mr. T. S. King.

Best Bouquet...Mrs. Burton.

Second ditto...Mr. C. Smart.

Best Device...Windmill formed of Dahlias, with Kitchen and Flower Gardens, Mr. C. Bathurst.

Second ditto...V. A. and Crown, Mr. Lamb.

NURSERYMEN'S PRIZES.

Best 24 Dahlias...Mr. Lamb, Miss Scroop, Contender, La Carnation, Essex Rival, Sir John Ashley, Knockholt Rival, Vitruvius, Grace Darling, Amato, Lady Bathurst, Wallace, Lady Dunglass, Argo, Model of Perfection (Syred), Primrose (Gaines), Lady Holland, Bloomsbury (Pamplius), Iver Hero, Mont Blanc, Countess of Pembroke, President of the West, Penelope (Headley's), Hero of Sevenoaks, Maresfield Rival.

Second 24 Dahlias...Mr. Beadle.

Extra for 24 Dahlias...Mr. G. C. Masters.

With prizes to Cottagers for Fruits, Flowers, and Vegetables.

Sept. 3. LEICESTERSHIRE FLORAL AND HORTICULTURAL SOCIETY. Prizes awarded:—

First pan of 15 Dahlias...Mr. J. Harden, from the gardens of C. B. Robinson, Esq, with Grace Darling, Dodd's Mary, Bree's Rosa, Cox's Defiance, Rienzi, Suffolk Hero, Springfield Rival, Unique, Duchess of Richmond, Contender, Amato, Rival Sussex, Advancer, Marquis of Lothian, and Climax.

Second pan of 15 Dahlias...Mr. J. Harden, with Dodd's Mary, Grace Darling, Pride of Sussex, Climax, Bree's Rosa, Horwood's Defiance, Contender, Amato, Rienzi, Springall's Conqueror, Rival Sussex, Suffolk Hero, Lancashire Witch, Beauty of the Plain, and Lewisham Rival.

Third ditto...Mr. G. Walker, with Frances, Harlequin, Pride of Sussex, Grace Darling, Plato, Springfield Rival, Unique, Utopia, Royal Standard, Rienzi, Bree's Rosa, Contender, Virgin Queen, Napoleon, and Miss Scroop.

First pan of 6 Dahlias...Mr. J. Smalley, with Unique, Duchess of Richmond, Amato, Rival Sussex, Bree's Rosa, and Contender.

Second ditto...Mr. R. Harris, jun., with Grace Darling, Hero of Wakefield, Rival Sussex, Amato, Fire Ball, and Unique.

Third ditto...Mr. T. Galloway, with Lewisham Rival, Horwood's Defiance, Unique, Rienzi, Fair Maid of Clifton, and Rival Sussex.

CLASSES.

Dark...1. Rival Sussex, Mr. J. Harden; 2. Bontishol, Mr. R. Harris, jun.; 3. Beauty of Hyde Vale, Mr. R. Harris, jun.; 4. Metropolitan Perfection, Mr C. Mortimer; 5. Essex Rival, Mr. G. Walker; 6. Cheltenham Rival, Mr. R. Harris, jun.; 7. Rival Sussex, Mr. R. Harris, jun.; 8. Mungo Park, Mr. C. Mortimer.

Purple...1 Royal Standard, Mr. G. Walker; 2. Amato, Mr. R. Harris, jun.; 3. Pandora, Mr. R. Harris, jun.; 4. Marquis of Lothian, Mr. G. Walker; 5. Egyptian Prince, Mr. G. Walker; 6. Horwood's Defiance, Mr. J. Harden; 7. Purple Perfection, Mr. J. Smalley; 8. Berkshire Champion, Mr. T. Galloway.

White, or Blush White...1. Lewisham Rival, Mr. G. Walker; 2. Pride of Sussex, Mr. J. Harden; 3. Blandina, Mr. G. Walker; 4. Andromeda, Mr. G. Walker; 5. Fair Maid of Clifton, Mr. T. Galloway; 6. Eva, Mr. G. Walker; 7. Clara, Mr. G. Walker; 8. Virgin Queen, Mr. T. Galloway.

Yellow, or Orange...1. Unique, Mr. W. Mitchell; 2. Topaz, Mr. J. Smalley; 3. Cox's Defiance, Mr. J. Smalley; 4. Seedling, Mr. R. Harris, jun.; 5. Rival Yellow, Mr. W. Mitchell; 6. Queen of Sheba, Mr. R. Harris; 7. Solomon, Mr. Harris, jun.; 8. Yellow Perfection, Mr. G. Walker.

Scarlet...1. Fire Ball, Mr. R. Harris, jun; 2. Countess of Liverpool, Mr. G. Walker; 3. Harris's Conqueror, — Stone; 4. Harlequin, Mr. G. Walker; 5. Scarlet Perfection, Mr. G. Walker; 6. Vivid, Mr. W. Mitchell; 7. Apollo, Mr. W. Mitchell; 8. Conservative, Mr. G. Walker.

Rose, or Rose Crimson...1. Grace Darling, Mr. J. Harden; 2. Mrs. Neild, Mr. G. Walker; 3. Marquis of Lothian, Mr. G. Walker; 4. Rienzi, Mr. J. Harden; 5. Springfield Rival, Mr. R. Harris, jun.; 6. Sir Henry Fletcher, Mr. G. Walker; 7. Springfield Major, Mr. G. Walker; 8. Ruby, Mr G. Cuff.

White, Tipped or Edged...1. Diana, Mr. G. Walker; 2 Lady Wetherell, Mr. G. Walker; 3. Dodd's Mary, — Stone; 4. Queen of Scots, Mr. G. Cuff; 5. Corinne, Mr. G. Walker; 6. Beauty of the Plain, Mr. G. Walker; 7. Selwood King, Mr. G. Walker; 8. Glory of Plymouth, Mr T. Galloway.

Lilac...1. Rosa, Mr. J. Harding; 2. King of Lilacs, Mr. G. Walker; 3. Seedling, Mr. G. Walker; 4. Lady Kinnaird, Mr. W. Mitchell; 5. Lilac Perfection, Mr. R. Harris, jun.; 6. Queen of Lilacs, Mr. R. Harris, jun.; 7. Seedling, Mr. R. Harris, jun.; 8. Paris, Mr. G. Walker.

SEEDLINGS.

First...Mr. G. Walker—Lilac.

Second...Mr. G. Cuff—Ditto.

First 3 Stove Plants...Hedychium Garnerianum, Begonia Agrostygma, and Davallia Canariense; — Stone, Gardener to R. Brewin, Esq.

Second ditto...Caladum Bicolor, Simingia Hallerii and Roella Formosa, — Buckley, Gardener to James Bankart, Esq.

First 3 Greenhouse Plants...Hoya Carnosa, Clematis Siebaldii, and Rochea Falcata, Buckley, Gardener to James Bankart, Esq.

Second ditto...Fuchsia Macrophylla, Gnidia Simplex, and Fuchsia Fulgens, — Stone, Gardener to R. Brewin, Esq.

Three Plants of (Celosia Cristata) Coxcombs...Mr. J. Walker, from the garden of John Nedham, Esq.

First and Second pan of Pansies...Mr. R. Harris, jun.

Best 6 Hardy Flowers... — Stone, Gardener to R. Brewin, Esq.

Sept. 16. CHESTER DAHLIA SHOW. Exchange Assembly Room. Prizes awarded:—

Best pan of 24 dissimilar blooms...Messrs. F. and J. Dickson, Suffolk Hero, Miss Scroope, Virgin Queen, Breese Rosea, Ringleader, Ne plus ultra, Contender. Perfection, Mackay's Raby, Rienzi, Amato, Grace Darling, Fireball, Argo, Pilot, Unique, Ansella, Metella, Lady Mallet, Lady Flower, Marchioness of Lansdowne, Lady William Powlett, Marshal Soult, Bowling Green Rival, Cox Defiance.

Second pan...Mr. Bernard Lewis, Wrexham, Miss Johnston, Hero of Wakefield, Stuart Wortley, Rhodu, Sir E. Sugden, Blandina, Countess of Forington, Topez, Duchess of Portland, Horwood's Defiance, Unique, Hope, Perolla, Duchess of Richmond, Mrs. Nield, Eva,

Suffolk Hero, Cox Defiance, Marquis of Lothian, Duke of Wellington, Bontishull, Napoleon, Hon. Mrs. Fox, Rienzi.

Best pan of 12 dissimilar blooms, for amateurs...Rev. P. W. Hamilton, Lady Kinnaird, Lord Ingestre, Virgin Queen, Grand Turk, Fire Ball, Springfield Rival, Unique, Stuart Wortley, Mungo Park, Ingestre Rival, Rienzi.

Second pan...Mr. Edwards, Stone's Perfection, Beauty of Kingscote, Topaz, Springfield Rival, Beauty of Clevelsnd, Conductor, Robert le Diable, Lewisham Rival, Fireball, Sir H. Fletcher.

First Scarlet...Fireball, Rev. P. W. Hamilton; 2. Fireball, H. Hesketh, Esq.; 3. Douglas Glory, Mrs. Yates; 4. Caleope, Rev. P. W. Hamilton; 5. Cassine, Miss Brittain.

First Dark...Robert le Diable, Rev. P. W. Hamilton; 2. Unknown, Mr. Thomas; 3. Essex Rival, Miss Brittain; 4. Diomedge, Miss Brittain; 5. Bowling-green Rival, Rev. P. W. Hamilton.

First Yellow...Topaz, Mr. Thomas; 2. Unique, Mr. Edwards; 3. Premier, Rev. P. W. Hamilton; 4. Stone's Yellow Perfection, Mr. Edwards; 5. Golden Sovereign, Mr. Thomas.

First White...Virgin Queen, Mrs. Yates; 2. Lewisham Rival, Mr. Thomas; 3. Blandina, Mr. Davies; 4. Queen Victoria (Gaines), Rev. P. W. Hamilton; 5. Mont Blanc, Mr. Brown.

First Lilac...Lady Kinnaird, Rev. P. W. Hamilton; 2. Ingestre Rival, Rev. P. W. Hamilton; 3 Lilac Perfection, Miss Brittain; 4. Lady Kinnaird, Rev. P. W. Hamilton; 5. Stuart Wortley, Rev. P. W. Hamilton.

First Purple...Ne plus ultra, Rev. P. W. Hamilton; 2. Hero of Wimbourne, Rev. P. W. Hamilton; 3. Middlesex Rival, Rev. P. W. Hamilton; 4. Wallace, Mr. Brown; 5. Ovid, Mr. Kelley.

First Tipp'd...Dodd's Mary, Rev. P. W. Hamilton; 2. Beauty of Kingscote, Mr. Edwards; 3. Marchioness of Tavistock, Miss Brittain; 4. Sylph, Miss Brittain; 5. Gem, Rev. P. W. Hamilton.

First Rose...Hope, Mr. Brown; 2. Gurling's Ruby, Mr. Twemlow; 3. Hope, Mr. Brown; 4. Coriolanus, H. Hesketh, Esq; 5. Marquis of Lothian, Miss Brittain.

First Crimson...Rienzi, Mr. Twemlow; 2. Mungo Park, Rev. P. W. Hamilton; 3. Springfield Rival, Miss Brittain; 4. Suffolk Hero, Mr. Thomas; 5. Springfield Major, Mr. Thomas.

Sept. 30. SPROATLEY FLORAL SHOW. Prizes awarded:—

Amongst the Dahlias were a most superb pan of 36 distinct varieties, grown by Messrs. Elletson, nurserymen and florists, Thorngumbald, near Hedon. More compact or beautiful blooms have rarely been exhibited at any provincial meeting during the season. Coxe's Defiance appeared excellent.

DAHLIAS.

White...1. Mr. Mainprize, Aldborough; 2. Rev. John Jadis, Humbleton; 3. Mr. Kirk, Hedon.

Pink and Rose...1. Mr. G. Birch, gardener to A. F. Reynolds, Esq., Melton; 2 and 3. Mr. Fewson.

Rosy Crimson...1. Mr. G. Birch; 2. Mr. Kirk; 3. Mr. Fewson.

Dark and Maroon...1. Mr. Kirk; 2 and 3. Mr. Fewson.

Yellow...1. Mr. G. Birch; 2 and 3. Mr. Milburne, Sproatley.

Primrose...1. Mr. Fewson; 2 Mr. G. Birch; 3. Mr. Singleton, Skirlaugh.

Crimson...1. Mr. G. Iveson, Hedon; 2. Mr. A. Dunn, Humbleton; 3. Rev. I. Dixon, Elsternwick.

Purple...1. Rev. I. Dixon; 2. Mr. Milburne; 3. Unknown.

Salmon and Buff...1. Mr. Kirk; 2. Fewson; 3. Mr. G. Birch.

Scarlet...1. Mr. J. Usher, gardener to Sir T. C. Constable; 2. Mr. Winter, Sproatley; 3. Mr. G. Birch.

Orange...1. Mr. G. Iveson; 2. Mr. Usher; 3. Rev. I. Dixon.

Blush...1. Mr. Singleton; 2 Mr. A. Dunn; 3. Mr. Singleton.

Striped on White Ground...1. Mr. Kirk; 2. Mr. Fewson; 3. Mr. Kirk.

Edged, or Tipped, on White Ground...1. Mr. G. Iveson; 2. Mr. Usher; 3. Mr. Milburne.

Lilac...1. Mr. Fewson; 2. Mr. Usher; 3. Mr. Birch.

Globe Flowered...1. Mr. A. Dunn; 2. Mr. Milburne; 3. Mr. Singleton.

Best pan of 36 varieties (premium by the Society)...Mr. Elletson.

Best Dahlia (by the Society)...Mr. Kirk.

First pan of 12 varieties (by the Rev. W. H. Hugall, president)...Mr. G. Birch; 2. (By the Society), Mr. Mainprize.

First pan of 18 varieties (by the Rev. T. Galland)...Mr. Milburne; 2. (By Mr. Pexton), Mr. G. Birch.

First pan of 24 varieties (by the Society)...Mr. Milburne; 2. Mr. G. Birch.

THE

FLORIST'S JOURNAL.

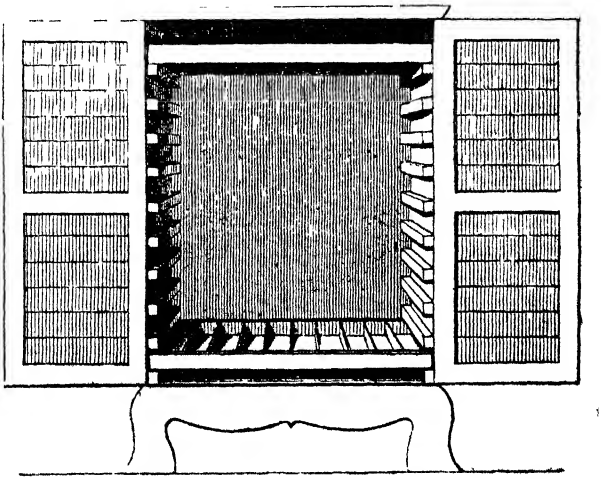
DECEMBER 1, 1840.

ARRANGEMENT AND CULTURE OF TULIPS.

BY MR. H. GROOM, M.H.S. FLORIST TO THE QUEEN.

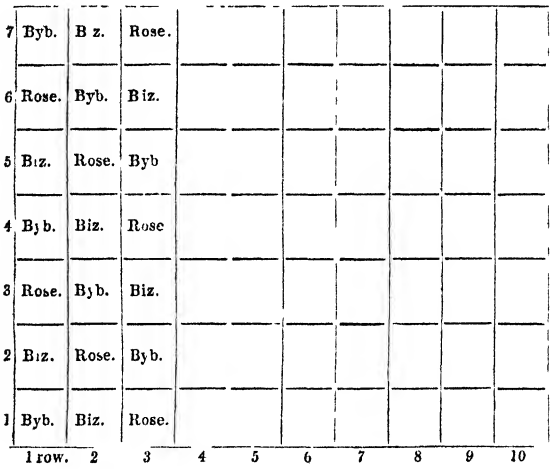
HAVING in my former letter given a description of the properties of tulips, I shall now proceed to give a few directions for their arrangement and cultivation. As some of your readers may not have seen the account of a tulip-case I gave some years since, I shall commence with describing it, as it is very necessary to be possessed of a case of that description to render what would be otherwise very difficult (the keeping the various kinds distinct) perfectly easy and simple: it also affords the greatest facility in their arrangement, so that the colours may be equally distributed throughout the bed.

The case should be 4 feet high, 2 feet 8 inches wide, and



1 foot 9½ inches from front to back: it should be furnished with slides for ten drawers: the doors should be 3 feet 2 inches high, the panels of which must be of wire-work, as well as the back of the case, for the purpose of allowing a free circulation of air, which is absolutely necessary for the health of the roots. I some time since tried perforated zinc, instead of wire-work, which has a very neat appearance, and answers the purpose equally well.

Each of the drawers must be 2 feet 7 inches long, 1 foot 8 inches wide, and 2½ inches deep. The length is to be divided



into 10 cells, and the width into 7; each cell being 2¾ inches, by 2½ and 2 inches deep. This will make room for 70 roots in each drawer. The reason for having seven cells across the drawer is that it may correspond with the tulip bed, which should contain seven roots across it. A case this size will, of course, contain 100 rows.

In arranging my tulip-bed, I begin with a byblœmen, then a bizard, and next a rose, (marked in figure 2,) beginning with the first row of the top drawer, thus :—

Row 1	No. 1 in the first row is a	Byblœmen,	viz.	Taglioni.
	2	„	Bizard . . .	Prince Albert.
	3	„	Rose . . .	Aglaia.
	4	„	Byblœmen .	Louis XVI.
	5	„	Bizard . . .	Nourri Effendi
	6	„	Rose . . .	Camuse de Croix.
	7	„	Byblœmen .	Queen Adelaide.

Row 2.	No. 1 in the second row is a	Bizard, viz.	.	Marshal Soult.
	2	„	Rose . . .	Duchess of Sutherland.
	3	„	Byblœmen .	Victoria Regina.
	4	„	Bizard . . .	Duke of Devonshire.
	5	„	Rose . . .	Claudiana.
	6	„	Byblœmen .	Pandora.
	7	„	Bizard . . .	Emperor of Russia.

and so on until the bed is complete, by which means I have the greatest possible mixture of the three classes of colour. Some persons do not put so many bizards into their bed, thinking they destroy its beauty; but I think they add life to it. I have known other persons to plant the same kinds in the corresponding rows on each side of the bed, but I cannot say I admire that plan, as it gives a formality to it. I prefer having the most dissimilar kinds nearest each other. I do not know that I need say anything more respecting the arrangement, as each person can use his taste in the distribution of the various kinds. I will, therefore, commence with their cultivation. The first thing necessary is to select a situation in the garden for the bed: it should be open, airy, and free from the drip of trees. I do not object to trees at a distance, particularly on the north and east sides of the bed, as they break off the cutting winds in the spring without "drawing" the tulips, which other protection is likely to do. Having made choice of the situation, the next thing is to mark out the bed, which should be 4 feet 6 inches wide, and of sufficient length to contain the number of rows intended to be grown, allowing 6½ inches between the rows; it should then be dug out to the depth of 2 feet, the bottom being left rough. The soil to fill it (which is by far the most important article) should be a fine rich hazel loam, moderately strong, which I prepare in the following manner. During the summer, I make a selection of a loam I think will suit, by first examining its texture, then the nature of the grasses composing the turf; and if I find them of good quality, and the soil well filled with the fibres of the grass to the depth of three or four inches, I do not hesitate using it, although it may sometimes contain marks similar to stains of iron, which are only the decayed fibres that have perished from the moisture of the situation, or the winter, although they are frequently mistaken for iron. Having decided on the soil, I have it dug with the turf about five inches thick; it is then placed in a stack with the turf downwards. I sometimes make the stack of alternate layers of loam and manure, beginning

with loam. This is a very good plan, as the virtue of the manure drains into the soil, and when wanted for use they are more readily mixed: the loam should remain in the stack for twelve or eighteen months before it is used, when it can be broken up and sifted through a coarse sieve. The loam which is stacked without manure may be used with about one-fourth of cow manure of two years old, or it may be used the first year without any; but the quantity of manure must depend upon the situation in which the tulips are to be grown, as I find that a situation like mine, where I am surrounded with buildings, and the atmosphere is charged with smoke, tulips, as well as other plants, require more stimulating with manure than they do in the country, where the air is pure; they also require a lighter soil, as the vigour of the plant being reduced for want of pure air, and frequently by having the pores stopped with soot, every facility should be offered for the most extensive increase of the fibres, that the plant may be able to make a strong growth. It must, however, be borne in mind, that although a vigorous growth is desirable, it must not be so strong as to run the colours of the flowers. This is the grand art of tulip growing,—to retain all the delicacy and beauty of tint, and at the same time to have a fine, healthy, and bold growth. One thing I would particularly recommend: not to make too great a mixture of various soils and manures, as I am of opinion that much injury arises from an indiscriminate mixture of soils, without knowing their chemical properties, as it is not improbable decompositions and new combinations frequently take place which we are totally unacquainted with, and which either neutralize the original good qualities that the soils may possess separately, or what is worse, produce a substance which is injurious to vegetation. I have been led to this conclusion from not deriving the benefit I calculated on from various mixtures of soils. I trust, however, that we shall not be long before we receive considerable assistance from the chemist, as the great advance which has been made in horticulture is attracting the attention of scientific men, not only to the component parts of soils, but to the individual properties of plants.

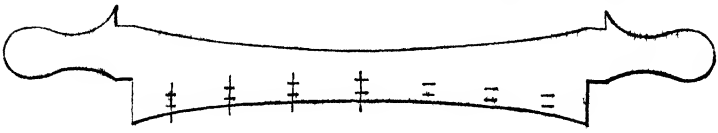
The soil being ready, it should be put into the bed about the beginning of October, to allow time for it to settle; it should lie in a ridge of sufficient height, that, when the mould is levelled down, it may be three or four inches above the walks, which should be raised rather above the other part of the garden, and a little

sloping from the bed. This is the soil in which the tulips are to be planted. The soil for covering them should consist of equal quantities of a very light clean mould and river sand, well mixed and sifted, which should be got ready by the side of the bed.

The usual time for planting the principal bed is the early part of November, as the weather is generally more settled about that period than it is later. The bulbs also begin to shoot, and should not be kept out much longer, otherwise they become weakened. The first fine day, therefore, before the 10th, should be selected, and the mould broken down with a potato-fork, making the bed highest in the middle, and rather convex. When it is raked smooth, put on a layer, one inch thick, of the light sandy mould intended for the covering, which must also be raked smooth. It is then necessary to mark the situations for the bulbs, which should be done in the following manner: have two rods, with the distances for the seven long rows of the bed marked on each, allowing rather more space between the centre row and the row on either side than between the others (the usual distance is 7 inches), and 4 inches from the outer rows to the edge of the bed, one of the rods being placed at each end of the bed. A line should then be strained from one end of the bed to the other, directly over the marks on them, and when tight, if lifted in the centre and sprung, there will be a mark left on the mould the whole length of the bed. Having completed these lines, they must be crossed by others at $6\frac{1}{2}$ inches' distance; this is done by a person on either side of the bed drawing a line across at the proper distances. The drawers should then be brought to the bed, and the roots placed firmly on the angles where the lines cross in the order in which they were arranged. When this is done, the bed should be covered 4 inches deep with the light mould and sand already prepared, and raked smooth and moderately convex. The object of having a lighter soil for covering the tulips is to allow the water to drain off more freely from the stems and foliage of the plants, particularly in the early spring, when much moisture in the soil is attended with danger; for should a frost set in, a considerable expansion of the mould takes place, which being unable, from its wet and close texture, to rise sufficiently, is pressed too firmly round the young shoots, frequently rupturing the vessels of the foliage or stems, and producing mortification of the part, and sometimes the

death of the bulb; it also offers less resistance to the progress of the young shoots, which is very desirable.

Some persons have fixed boards round their beds: in that case, there is an easy mode of levelling and marking the places for the roots, which I made known some years since. It consists in having a strike, which is made of wood, about two feet longer than the width of the bed; its lower edge, which is used for



levelling the bed to receive the roots, and marking their places, is 4 inches deep, and fits between the boards; on being moved backwards and forwards by a man at each end, it lays the mould in the desired form, having a curve two inches higher in the middle than at the sides for that purpose. Thus levelled, the bed is ready for marking the places for the bulbs, which is done by having seven pegs to fit into staples placed at proper distances on the face of the strike; they should project a little below the edge. The strike should be put down at the distances for the cross rows, and the exact places for the bulbs will be marked. The roots are then to be placed on those marks, and the bed filled with mould; the strike must be reversed and drawn from one end of the bed to the other, which will remove the mould not required; the curve on this edge may be rather deeper than on the lower edge.

Nothing more will be necessary until the latter end of January or beginning of February, when the bed will require protection. The bulbs will bear all the variations of weather until that period, unless the frost should be similar to what it was in January 1838, when it would be advisable to cover the bed with mats.

Having given the necessary directions until February, I shall reserve the spring management for a future number.

H. Groom.

Walworth, Nov. 19, 1840.

PHILOSOPHY OF FLORICULTURE.

Long before our attention was directly called to this subject by the communication of "Tyro,"—whom our readers will perceive is no *Tyro* after all,—we were fully aware of its importance, and of how indispensable a moderate knowledge of it is to every one who cultivates flowers in any other way than as a merely servile copyist;—and he who gets not beyond this, stands small chance of making a single step of advancement in the delightful art, or even of preserving for any length of time the beauty and health of those flowers which he purchases. This may be all very well for the mercenary grower, who cares for nothing but an extensive sale of the same common and easily-grown flowers, year after year, in interminable succession. But to the art it is a serious disadvantage; and it is equally injurious to that higher department of the trade, whose minds are constantly on the rack, and whose monies are continually in circulation, in order to produce something that is new and excellent. The accomplishment of this is the glory of floriculture; and unless in the cases of plants of very peculiar and delicate habit,—and much less in them than is generally believed,—it feels its way downward through all ranks in society; and we have many instances in which, after the lapse of not very many years, a plant has not only been obtainable as a border flower by the humblest cottager, for fewer farthings than it originally cost guineas, as a conservatory plant, to the wealthy, but that the cottager can, with the improvement of time, rather than the loss of it, multiply the same plant almost without limit, and gratify his friends or neighbours with a supply, without any cost to himself save the pleasure of gratifying others,—the sweetest of all pleasures to a mind rightly constituted. Convinced that the attraction of the people's attention, generally, to simple, refined, and intellectual pleasures, is far more calculated to call forth the good and repress the bad, than all the laws, with all their penalties, that ever were, or that ever can be enacted, even though they should have recourse to a system of rewards in order to deepen the repulsiveness of the punishments, we are strenuous advocates for the universal diffusion of floriculture, from a thorough conviction that there is no one recreation of the leisure hour at all comparable to it, if it is grounded upon right principles, and the owner

nurses and tends his flower for its own sake, and not on the sordid consideration that it belongs to him and not another.

Ever since we began our floral labours, the queries of correspondents have furnished evidence that this, the very foundation of the art, is the subject upon which florists are especially in want of information. In turning to the short note upon *Crassula coccinea*, in a subsequent part of this month's publication, the reader will find that a correspondent,—and a very intelligent correspondent,—brought that plant to the gates of death, by not knowing its geographical habit, and thus giving it water at a time when it should have had none.

This instance very naturally determines the particular branch of the philosophy of floriculture to which it will be best to direct the few remarks which we have room to make in the present number. This is the application of water to plants; and it refers equally to them in all situations, whether they are grown in borders and beds, in window-pots, or in more extensive places of protection, such as conservatories or stoves. There are great differences in respect of the quantity of water which plants can bear, without being materially injured by it; but, with the exception of such as grow wholly submerged, there are none that may not be hurt by an over supply at some stages of their growth. This holds true even of plants of the most aquatic habit, provided that they flower; for in every instance it is essential to the perfection of a flower that it should come to the surface and be for some time dry. Plants which propagate in an entirely submerged state never have distinct flowers; and even the fungi, which are flowers brought forward by the autumnal rains, melt away without producing any fertile spores, if those rains are too long continued. The principle, indeed, is a perfectly general one, modified in innumerable ways, no doubt, according to the varying nature of plants, but still in itself one and invariable. Inflorescence, or the act of impregnation, which is the natural purpose of all flowering, must be performed in dry air and not in water. We have proof of this everywhere around us; for, in orchard, in cultivated field, in garden, and in wild nature, an over-rainy season during the flowering is invariably accompanied both by decreased numbers and beauty, and diminished fertility of the flowers. Any one who chooses may verify this by his own observation, in what part of the country soever he happens to be situated; and if this is the case with an

excess of natural rain, much more must it be the case with an excess of artificial watering,—a process which is always more clumsy and less beneficial than watering by the natural rain of heaven.

We are distinctly to understand that there are two living processes which seasonally follow each other in a healthy and fertile plant,—the growth of the plant itself, as an individual of one generation of its race; and the elaboration of the flower and parts of fructification, which are wholly to be separated and cast off, whenever the seed arrives at such maturity, as that it is in a condition for generating if placed in a situation proper for that purpose. These two operations may go on together in the same plant, but never in the same part of it; and if they go on together, each of them tends to weaken the other one.

Knowing this, and paying careful attention to the difference between the circumstances which stimulate those two kinds of vegetable action, we are enabled so to work the plant, as to make it run more to individual growth or more to flowering, according as we may desire the one or the other. If we would have a large and handsome plant, we must keep down, or, if necessary, entirely suppress the flowering, until these properties are obtained; and if afterwards we would have the flowering profuse and luxuriant in proportion to the previous growth of the plant, we must repress its growth as a plant, and, in as far as we can, direct the whole of its energy to the production of flowers. This is what every successful floriculturist does in reality, whether he understands the principle upon which he proceeds or not; and our object is to make him, in so far at least, acquainted with the principle.

The grand distinction between these two kinds,—we might call them successive generations,—of life in the same plant, is this: the growth of the individual plant works more by heat with moisture; and the flowering works more with heat and light, and a diminished supply of moisture. Light is indeed necessary to the healthy individual growth of all plants, excepting the very few which grow in mines and places absolutely dark, none of which are flowerers; and moisture is necessary to bring on the flowers until they are nearly perfected, and begin to blow, or expand their petals,—for until they do this they are still parts of the parent plant, and possess the same kind of vegetable life with the rest of it; but when they are perfected, and impregnation is about to take

place, the grand function of the flower is directed to the originating of a succession-plant by means of the seed; and though, while the seed is advancing toward ripeness or maturity, it still depends upon the parent plant for its nourishment, it is not, physiologically speaking, any part of that plant as an individual, and cannot in any way, or to any extent whatever, promote the additional growth of its parent.

Hence we see that, in order to expand its flowers and ripen its seeds, the plant requires a more dry treatment than that which is best for promoting its growth, or increase of size, as an individual. We find, too, that very old plants, as for example old fruit-trees, though they endeavour to push out new shoots, in rather an unnatural manner, from various parts of their stems, yet increase very little in growth-wood upon the sprays. On these they chiefly produce fruit-buds; and in proportion as the growth of wood on the sprays diminishes, the flowers and the fruit become individually smaller, and the latter are harder, less valuable, and more subject to the attacks of insects. Plants, even ligneous ones, which last for years, and which are cultivated for their flowers, are seldom allowed to run into this state, because the flowers would thereby be deteriorated. The object in them, and indeed in all flowering plants, is to get a vigorous growth immediately before the flowering, except in the case of tropical plants of double seasons, which make their growth in the one season, and elaborate and perfect their flowers in the other. Plants are adapted to so many soils, situations, and differences of season and climate, that no general rule can be laid down which will apply equally to the details of all, or even any considerable number of them; but still the influence of a general principle may be traced through all the subject, varied as it is; and this principle is, first to get a vigorous individual growth, by the application of as much moisture as the nature of the plant, and the temperature of the place in which it is grown, will bear; and then, to abate the moisture, and get dry heat and light for a vigorous flowering. If the object merely be to produce seeds, the heat should be kept up, if not increased, until the function of the flower is at an end. Under such treatment, however, the duration of the flower will be exceedingly brief; and this would not answer the general purposes of the florist, who wishes to keep his beauties in bloom as long as he possibly can. From this, those who grow the same species of plants for show, and for

the production of seed, whether by cross impregnation or otherwise, may derive a most useful lesson: the heat of the plant for show should be diminished along with the dry treatment, because this will make the flowers last longer without impairing their beauty; whereas, if the plant is flowered for seed only, the heat should be kept up; because, though the duration of the flowers will be much more transient, the perfection and fertility of the seeds will be much more certain. We are not sure that many florists attend to this in those plants which require much artificial treatment; but we are certain that in neglecting it they very much neglect their own interests.

Where plants are over-watered, or have water given to them at times when, according to their habit, they should have none, one or other of these results invariably ensues: the plant is either macerated and rotted, and dies in whole or in part; or its habit becomes changed so as to work chiefly for individual growth, and very little for flowering; and the forced and unnatural shoots which it thus makes are far more tender and liable to casualty and disease than if it were treated according to its natural habit. Both of these results are fatal to the floriculturist; for, by the first of them he loses his plant altogether; and, by the second, he reduces it into a condition in which it is unsaleable, and good for nothing as a breeder. Bulbs suffer the most from injudicious treatment of this kind; and they suffer more in proportion as they are more highly bred and valuable.

It is natural to suppose that, if any imported or cultivated plant is left to the natural circumstances and seasons of the place where it is planted, it will either in so far assimilate itself to them, or it will perish in the attempt; and it will do the one or the other in proportion as there is more or less resemblance between the climate and seasons of its native locality and those of that in which it has been planted and neglected. We have a striking instance of this in the cultivated hyacinth, which, whether it has or has not been bred out of the common one, soon degenerates to something very like it, if left year after year in the same ground. One has merely to examine the ruins of a former garden which have lain long in a state of neglect, to be convinced of the truth of what has been stated.

Flowers are most abundant and beautiful in tropical climates; and in all regions of the world, the more tropical the character,

the more abundant and beautiful are the flowers. But here the question arises, "What is meant by 'tropical character?'" Does it depend solely upon difference of latitude, as is said or sung in the common school-books of geography; or does it depend upon the isothermal lines, or curves of equal mean temperature, as established by observation?" It does no such thing; the summer air in the dry plains of northern Russia has often a higher temperature than the average of India; and yet there are no tropical plants there, and few plants of any kind except the humblest lichens and mosses. Nor is it difficult to see the cause of this. On the plains to which we allude, the sun is never below the horizon during the heat of the season; and therefore the plants get no nocturnal rest, which is just as essential to their healthy growth, and especially to their flowering, as the seasonal pause is to the preservation of their characters. Seasons of alternate humidity and drought; pretty long nights, even in the summer; and a porous soil to afford drainage during the rains, are what really constitute a tropical character—the circumstances most favourable to the successful growth of fine flowers; and though England has upon the whole a dripping climate, yet the florist can by judicious treatment give his portion of the soil something of a tropical character. It is true, that from the many varieties of habit which exist among plants themselves, the florist must have many modifications of his treatment; but still the general principle holds good, that the more tropical he can render his grounds, either by wholesome sand mingled with the soil, or by any other contrivance, his flowers will invariably be the finer and the more abundant.

On the other hand, if he allows his grounds to get into the anti-tropical character of a cold and retentive soil, and a continual dribbling of humidity, whether from the clouds or the watering-pot, he works directly against the principle of flowering, and his plants will either perish or run to barren shoots, in the most unseemly and unprofitable manner. We have heard some unskilful parties boast that they could by watering keep in growth all the year round plants which are generally rested for a season; but though they have boasted of the growth, they have been careful not to say a word about the subsequent flowering. A case very much in point will illustrate this: suppose after a hard day's employment, a healthy man is in a profound sleep, would it add to his comfort or conduce to his health, if you were to try and

cram him with beef-steaks; and yet this is exactly the kind of treatment which the out-of-season waterers give to their plants.

An instance of the existence of a district, perfectly temperate in its climate and vegetation, though situated near the centre of the northern half of the torrid zone, and surrounded by districts of perfectly tropical character, some of them nearly as much elevated above the level of the sea as itself, will show upon what circumstances tropical character depends, and consequently how these can be best approximated in temperate latitudes. The Neelgherry hills or mountains in southern India afford a very remarkable example of this kind. They stretch from east to west across the peninsula in about 11° north latitude. Their eastern extremity abuts on the low plain toward the Bay of Bengal; and at their western extremity there is a break in the western mountains of about sixteen miles in width, and cleft down almost to the level of the sea. All the rest of southern India has mountain elevations extending northward and southward, and confining the rains in all cases to not more than the two seasonal monsoons, and, generally speaking, only to one of them—some seasons to none in certain districts. The consequence is, that the vegetation of all these, the principal parts of southern India, is highly seasonal in its character—the trees are entwined with creepers, and festooned with Orchidaceæ, displaying the most exquisite beauty when they are in flower; and the summit-levels are covered with close jungles of bamboos and other thorny and fast-growing plants, which are more impenetrable than any forest, and retain the rain that falls, in putrid and pestilent swamps.

But, on the Neelgherry hills, unless upon the very lower slopes, there is scarcely one vegetable of tropical character: no Orchidaceæ, no jungles, no swamps, and none of the dangerous and offensive animals which inhabit the naturally foul places of the earth. There are frequent showers all the year round; and the result is, that the air is very temperate, and varies little one season with another. The vegetation corresponds, and is European in its general character. Roses, honeysuckles, jessamines, myrtles, balsams, geraniums, marigolds, and daisies, are among the prevailing wild flowers; while the chief native fruits are hill-gooseberries, raspberries, and strawberries. In place of jungle there are copses of gooseberry, rose, and other small shrubs, together with large fern brakes, such as one meets with on an English common.

What is the cause of this temperate climate, and northern vegetation, in the very midst of a country highly tropical in all its characters? It is easily told; and the telling of it conveys a most useful lesson to florists as to the time and mode of applying water to their flowers. The break in the western mountains lets in the full effect of the south-western or principal monsoon upon these hills; and as the rain is copious, and the temperature comparatively low, the moisture is retained, and clouds continue to be formed, and to fall in showers, long after the drought has set in on the tropical parts of the country. Then again, before these showers resulting from the south-west monsoon are completely over, the north-east monsoon sets in, and performs the same office for the remaining part of the year. Thus these hills, though in the torrid zone, have a temperate climate and character, because they are supplied with water all the year round; and, upon the same principle, he who will keep continually watering his flowers must be prepared to look for a great deterioration in the operation of flowering.

ON THE CULTURE OF LILIUM.

BY MR. P. N. DON.

I AM often surprised that this splendid tribe of plants is not generally cultivated, at least cultivated with more care, and to greater perfection than they are at present. We never see them in beds like tulips, but only in patches, which can give no idea of their beauty. If half the attention was paid to the cultivation of lilium that is paid to the tulip, we might expect the most splendid results from crossing. Independently of crosses, the species alone deserve the most careful cultivation; for some of them are the most beautiful objects in creation. It is very strange that the florist, who is so fond of flowers, who cultivates the tulip, the anemone, and the ranunculus, with so much care, and to such perfection, should neglect one tribe which is of as much importance and susceptible of as much improvement as any of the others, and is also quite as much a florist's flower. The great diversity in their forms, and their various seasons of flowering, must, I think, render them of greater value than even a tulip bed. A

person may enjoy a bed of lilies for several months, which cannot be the case with tulips. The plan which I should propose for those who wish to grow liliums to perfection is this: A bed should be formed, proportioned to the number that the grower has got to plant. The common soil should be taken out to the depth of three feet; and it should be filled up with the following compost: two barrow-loads of turfy loam from a pasture field, with an equal portion of turfy peat; to these, add one barrow-load of leaf soil, and also an equal portion of sharp sand, with one barrow-load of well-rotted manure, and so on in proportion, till such time as you have got as much together as will fill the bed. Let all this be thrown up into a heap for a year before it is wanted, and frequently turned in the course of that time. If the bottom is wet, it would be well to fill up the bed one foot with broken stone, and to lay upon that turf, with the grassy side upwards, as it will not root so soon as if it was turned downwards. Over this should be laid six inches of well-rotted manure. With a dry bottom, it will require no stone, but only laying the manure at the bottom of the bed. The bed should then be filled up to about two feet and a-half with the compost before mentioned. After it is filled in, it should remain for about a fortnight before it is planted; so that the soil may get well settled down. The roots should be planted as early in January as the weather will admit. The planting of them should commence with the tallest towards the top of the bed, and so on till you reach the bottom of the bed with the lowest species. The crowns should be six inches below the surface when planted. When finished planting, the bed should be heaped over and covered with mats every night, and every day that is frosty; but every fine day the mats should be taken off, and even when raining, as the rain will do them no harm, but good. The mats should be put on as long as there is any appearance of frost.—I should have said, that, when planting, it would be necessary to put a little sand around and also over the tops of the bulbs, the same as is done with tulips. It will also be necessary to have a covering for the bed, so that the plants when in flower may be protected from heavy rains and cold cutting winds; and also, to protect the late flowering ones, it will be proper to proportion the distance to the size that the plants grow to when planting, for some of the species will require a foot in the row, and a foot

between the rows, and some of them more; but I shall mention the height of each species as I go along, that is, in enumerating the species, as far as I am able.

As soon as the plants are all done flowering, it will be necessary to take them up, and throw out the soil that is in the bed, that it may get the benefit of the air and rain, so as to sweeten it, and prepare it again for the following season; and, when filling it in, it should have some more manure put at the bottom of the bed, and also some fresh compost should be added. When the bulbs are taken up, they should be put into a cool and dry place, and covered over with dry *sphagnum*, or bog moss, as that will keep them fresh and healthy. The planting should again take place in January as before; and so on with them every year. It will be necessary to take away all the small bulbs from the flowering one before planting; and by following this plan, I am confident that a most beautiful show of flowers will be got.

I should have mentioned, that a bed should be found for the young bulbs, to get them on to a flowering state, so that they may be ready to be put in, if any of the flowering bulbs should die, and also to forward any of those that are rare. They should not be taken up till they are in a flowering state: they then should be treated the same as those in the flowering bed are.

The leading species are as follows:—

Lilium speciosum *roseum*.—This splendid species, a good figure of which is given in the November number of the "Florist's Journal," belongs to the sixth class and first order of the artificial system, as it is called, or rather the Linnean system more properly speaking, and to the natural order *tulipacea*: the sepals and petals are of a delicate rose colour, beautifully spotted with red,—or I rather should have said, red tubercles, or glands, which give the whole plant a splendid appearance. The leaves are oval, lancet-shaped, somewhat pointed; the stem rises to the height of three feet, and is finely branched, and bears about forty to fifty flowers, which open in rapid succession. There is not any plant I know which can vie with this in beauty. I ask, is this not deserving of the greatest care and attention in its cultivation? The figure given was flowered at Messrs. Rollisson's nursery, Tooting; and they have some young plants. It is a very difficult one to increase, and I fear will continue rare for some time. It is a native of Japan, and, I believe, will prove hardy, or nearly so,

with a slight protection. The compost that I have recommended for the bed, will answer well if it is to be grown in a pot; —but my wish is to see this grown along with the others in a bed, where I have not the slightest doubt that it will answer, though it has been hitherto grown in the greenhouse. I hope to live to see the day when some spirited florist will undertake to cultivate those beauties in the way that I have recommended; and I am confident he will be well recompensed for his trouble, by having a most splendid show of flowers, more than equal to the finest tulip bed.

Lilium Speciosum Album.—This is another splendid variety of the preceding, the flowers being pure white, and of the same form, with very dark green and glossy leaves. This rises to the height of three feet and a half. It has flowered at the Tooting nursery. It is a native of Japan.

Lilium Speciosum Punctatum.—This is also another variety having white flowers with dark red spots. It is a very scarce variety, and very beautiful, and rises to about four feet in height, with dark green glossy leaves. It is also a native of Japan.

Lilium Speciosum Rubrum.— This variety is very near *roseum*, but is more red. Still it is a beautiful variety. Its height is about three feet. All the varieties of this species flower about September.

Lilium Superbum.—This species grows to the height of six feet, and is a beautiful plant. The colour of its flower, a light orange. Flowers from June to August; a native of North America.

Lilium Tigrinum.—The tiger-spotted lily. This plant grows to the height of six feet, and is very beautiful; it flowers from July to September; a native of China.

Lilium Lancifolium.—The colour of this is orange; it flowers from July to August, and is a most beautiful species. Its height is four feet; a native of Japan.

Lilium Philadelphium.—The height of this is five feet; the colour of the flowers is scarlet; it is a native of North America, and flowers from July to August.

Lilium Glabrum.—The height of this is four feet; it flowers from June to August, and is a native of Germany. The colour of the flowers is orange.

Lilium Chalcedonicum.—The colour of the flowers of this is scarlet; and it is a native of the Levant; the height is four feet.

LILIUM ANDINUM.—The height of this is four feet; the colour of the flowers scarlet; it flowers from July to August, and is a native of North America.

LILIUM CANADENSE.—The colour of the flowers is light orange; the height of the plants four feet, and it is a native of North America.

Lilium Rubrum.—This is a variety of *Canadense;* the colour of the flowers is red; the native country is North America; flowers from July to August; height four feet.

LILIUM CANDIDUM.—The colour of the flowers of this is white, and the height three feet; it is a native of North America, and flowers from June to July.

Lilium Variegatum.—This is a variety of *candidum;* the height is about four feet; it is a native of North America; the colour of the flowers is white, and it flowers from June to July.

Lilium Petriatum is another variety of *candidum;* the flowers are streaked and white; a native of North America; rises to the height of four feet; flowers from June to July.

Lilium Spicatum is also a variety of *candidum;* the flowers are white; the height is four feet; a native of North America; flowers from June to July.

LILIUM NEPALENSE.—The colour of the flowers is white; the height is three feet; it flowers from June to July, and is a native of Nepal.

LILIUM LONGIFLORUM.—The colour of the flowers is white; flowers from May to June, and is a native of China; height two feet.

LILIUM CAROLINIANUM is a native of North America; the colour of the flowers is orange; the height is two feet, and it flowers from July to August.

LILIUM JAPONICUM.—The colour of the flowers is white; the height two feet; a native of Japan; flowers from July to August.

LILIUM BULBIFERUM.—The colour of the flowers is orange; a native of Italy; flowers from June to July; height three feet.

Lilium Umbellatum.—This is a variety of *bulbiferum,* the colour of the flowers is orange; it is a native of Italy; height is three feet; flowers from June to July.

LILIUM CROCEUM.—The colour of the flowers is yellow; the height three feet; flowers from July to August; I do not know where this species is a native of.

LILIUM LATIFOLIUM.—The colour of the flowers is orange; the height is two feet; a native of Europe; flowers from June to July.

LILIUM SPECTABILE.—Flowers from June to July; is a native of Daouria, on the border of Chinese Tartary; colour of the flowers light orange; height two feet.

LILIUM CATESBÆI.—A native of Carolina; flowers from July to August; colour of the flowers scarlet; height one foot.

LILIUM CONCOLOR.—Height two feet; flowers in July; the colour of the flowers red; a native of China.

LILIUM MARTAGON.—Height three feet; colour of the flowers purple; flowers from July to August; a native of Germany.

Lilium pubescens is a variety of *martagon*, with pubescent leaves and stem; the colour of the flowers is orange, with spots, a native of Germany; the height three feet; flowers from June to August.

Lilium martagon glabrum.—Smooth stalked; flowers purple; blooms from July to August; a native of Germany.

Lilium pallidum.—Pale-flowered lilac; height three feet.

Lilium elatum.—Tall; flowers purple; height four feet.

Lilium dorsipunctatum.—Spotted backed; flowers purple; height three feet.

Lilium purpureum.—Purple; height three feet.

Lilium martagon purpureum.—Dark purple; height four feet; a native of Germany.

Lilium martagon scellare.—Edged; flowers purple; height three feet.

Lilium petiolare.—Petioled; flowers purple; height three feet.

Lilium martagon purpurea plenum.—Double purple; height three feet.

Lilium martagon album.—Flowers white; height three feet.

Lilium martagon albo plenum.—Double white; a native of Germany, as all the above varieties are; flowers from July to August.

LILIUM PYRENAICUM.—A native of the Pyrenees; the colour of the flowers dark orange; flowers from July to August; height two feet.

LILIUM PUMILUM.—A native of Daouria; height one foot; colour of the flowers scarlet; flowers in June.

LILIUM POMPONIUM.—Native of Siberia; colour of the flowers red; flowers from May to June; height two feet.

LILIUM PENDULIFLORUM.—Pendulous flowered; the flowers are copper-coloured; height one foot; flowers from June to July; a native of North America.

LILIUM MONADELPHUM.—Height two feet; colour of the flowers yellow; flowers from June to July; a native of the Caucasus.

LILIUM TENUIFOLIUM.—A native of the Caucasus; colour of the flowers scarlet; flowers from June to July; height two feet.

LILIUM PERIGNIUM.—Colour of the flowers white; height four feet; flowers from June to July; a native of China.

LILIUM ALSTRŒMERIFOLIUM.—Colour of the flowers a light scarlet, beautifully spotted with red; a native of North America; height three feet; flowers from August to September.

LILIUM VOLUBILE.—Colour of the flowers light grey, beautifully spotted with brown dots; a native of North America; this is a very slender grower, as well as the former; time of flowering from July to August.

LILIUM PEREGRINUM.—Drooping flowered; height two feet; colour of the flowers white; flowers from June to July; a native of the Levant.

LILIUM BUSCHIANUM.—A native of Siberia; flowers in June; colour of the flowers orange; height three feet.

LILIUM THUNBERGIANUM.—Colour of the flowers orange and scarlet; a native of Japan; height three feet; flowers from June to July.

LILIUM ATROSANGUINEUM.—Colour of the flowers dark red; flowers from July to August; a native of Japan; height four feet.

LILIUM CORRUSCANS.—Glittering; colour of the flowers scarlet; height two feet; flowers from August to September; native country not known.

LILIUM PULCHELLUM.—Colours of the flowers scarlet; a native of Daouria; height two feet; flowers from July to August.

LILIUM PUDICUM.—Now called by the generic name of *Amblinion*; colour of the flowers yellow; height one foot; a native of North America; flowers from May to June.

LILIUM AFFINE.—Now called *Amblinion lanceolatum*; colour of the flowers purple; height two feet; flowers from May to June, a native of North America.

LILIUM CAMSCHATCENSE.—*Amblinion camschatcense*; colour

of the flowers purple; a native of Kamtschatka; flowers in May; height one foot and a-half.

It will be at once seen, that a most splendid bed could be formed of all the species and varieties that are here enumerated; and if any spirited florist were to set about collecting all the species and varieties he could get, I am confident that they would well repay him for the trouble that he took in collecting them. I am also certain that many beautiful species have been lost to the country, from want of attention to that beautiful tribe. There is not any tribe of plants which is so extensive, and at the same time so beautiful, and also perfectly hardy as the lilies, and yet there is none that has been so much neglected. For, unless now and then, a species might be taken care of for a time—for as long as it was saleable, if a nurseryman had it; but as soon as that was gone, so went the plant also, that is, no care was taken in its cultivation. It was the same with the nobility and gentry; as soon as its novelty was over, away went the plant, though it was ever so great a beauty.

Tooting Nursery. P. N. Don.

ON THE HYDRANGEA.

TO THE EDITOR OF THE FLORIST'S JOURNAL.

Sir,—Having seen in the October number of "The Florist's Journal" a letter from "*Querist*," relative to the culture of *Hydrangea*, perhaps the following remarks may not prove worthless to the readers of a periodical which has well and ably filled up a gap in the floricultural world. They are not intended as directions for culture, but merely as observations that may be a guide to your correspondent.

The great desideratum in growing it appears to be obtaining blue flowers; and I have known many persons try with the greatest assiduity and care, by watering it with solution of alum, &c. &c., to produce them, but ineffectually; while in other districts, without any care, treated as a mere shrub, flowers in abundance, blue and pink, completely cover the foliage. Probably no two counties in the kingdom show how much this depends on soil, better than the two neighbouring ones of Wicklow and Dublin; and in the

former, where it is of a light, peaty, and vegetable nature, nothing can exceed the luxuriance of their growth, except perhaps Killarney, where really they surpass any thing that can be imagined. The shrub is absolutely covered with trusses of twelve to eighteen inches in diameter, of every shade of blue and pink. The soil, both there and in the county of Wicklow, is entirely free from calcareous matter; while in Dublin it is of a stiff bracing nature, and it is very hard to get them to grow well, and still harder to flower well. Of course, artificial soil will do much to improve their growth; but to have them in perfection, a natural light moist soil, entirely free from any calcareous matter, and pure mountain or sea air, are, in my humble opinion, indispensable. Probably the great moisture of our climate may be another reason for their succeeding so well.

If you think these remarks worthy a place in your valuable journal, pray have the kindness to insert them; and, wishing it every success, I am, Sir, your obedient servant,

Dublin, Nov. 10, 1840. H. H. D.

REMARKS ON THE ECHEVERIA.

The genus *Echeveria*, named by De Candolle in honour of a M. Echeveri, an eminent botanical draughtsman, is one of our succulents, and native of South America. Although one of the species has scarlet flowers, they are not at all remarkable for their beauty. But the whole of them are remarkable for their power of self-reproduction. A vast majority of plants reproduce themselves by seeds; many by suckers or by offsets; and many again by deciduous tubers or bulbs in the ground; while others increase themselves by deciduous buds formed on their stems, and by living plants generated in their capsules, or upon their flowering spikes. And there are many plants that reproduce themselves by all these different modes in the same season.

But the *Echeveria* increases itself in a different way from all these. The plants are composed of a fringe of what are usually called radical leaves, because they issue from near the root and close to the surface of the ground. The flower stem rises from the centre, and bears a series of smaller leaves from top to bottom. These smaller leaves are articulated with the stem, and attached

to it by a single fibre, but easily brushed off by the slightest pressure; and besides, they are naturally deciduous.

Now these small leaves are actually organized progeny; for no sooner are they cast upon the ground than the fibre just alluded to fixes itself along with others in the ground, and a new plant is thus established.

This plant, then, appears to be formed like some reptiles, or certain animals, which carry their progeny on their back, or on some other part about them, until they can provide for themselves, when they are shook off. So it is with the *Echeveria;* they are symmetrical in form, made up of parts bearing the resemblance of leaves, but which are in fact really young plants disguised in the shape of foliage; and no doubt exercise all the functions of leaves in behalf of the mother plant before she throws them off.

There are many other succulents whose leaf-like appendages partake of the structure of stems, and which if planted in light dry compost, and placed in bottom heat, take root and develop all the parts of the plant whence they are taken.

OF THE CHINESE CHRYSANTHEMUM.

We are all regretting at present (Nov. 10) that our summers are not long enough for the full display of this interesting exotic in the open air. The plant grows luxuriantly with us; but whether our climate be too favourable to its growing powers, and thereby retards the development of its flowers, remains to be considered; and also whether there can be any practical means or mode of management among florists by which the flowering might be expedited.

All the species and varieties of the Chinese Chrysanthemum now in this country are easily propagated,—by slips or cuttings in the spring—by layers of the points of the shoots in summer—and sometimes by seeds produced by some of the semi-double varieties. But in whatever way they are propagated, or wherever grown in the open air, and even giving them the advantage of a south wall as a means of maturing the flower-buds, still their season of blooming is but little advanced; and at the very time when a great majority of them are promising their beauty, a single night's frost happens, and lays them prostrate for the season.

This is a circumstance which deserves the attention of florists, so to manage the plants that their youthful vigour may be repressed, and premature full age brought about. The progress of a single shoot, whether left on the old stool, or parted off as a slip, or rooted as a cutting, will continue increasing in bulk and length from the month of March till the end of the month of October. Now the object of the florist should be either to commence its summer growth a month or two before March; or so hurry on its season of youth, that it may arrive at full age before the beginning of winter. Whether this be practicable, or whether it would be effectual, is more than we can vouch for. That it may be done in a hot-house we have no doubt; and perhaps some scheme may be devised for obtaining the same result in the open air.

There is a practice in kitchen gardening which has some bearing on this question, or rather makes clearer the idea we wish to impress: it is this—dwarf French or kidney beans are impatient of frost, and therefore are liable to be killed if planted too early in the spring, and if not planted till all danger from frost is over, their pods do not come in soon enough for table. But if the beans are planted in autumn in dry earth, and kept dry and safe from frost throughout the winter, and transplanted in the open ground about the middle of May, they will very soon show both flowers and pods, and long before those crops planted in the end of April or beginning of May. Now this is an example of how plants may be compelled to pass the first stage of their life in a state of torpor, and when awakened exhibit at once the results of mature age. In this case it may be urged that the plants are constitutionally different, the bean producing flowers laterally, while those of the chrysanthemum are terminal, and of course more tardy in flowering. But in the case of terminal flowering plants, if they be sown too early, or if improperly treated during the first stage of their growth, they will instantly start into flower:—instance cauliflower, cabbage, &c.

We know not whether the above remarks will be of any service, as leading to any new method of treating the chrysanthemum; but we are not without hopes that, from the great amount of skill possessed by our readers, some plan may be devised to accomplish what is so much wished concerning it.

ON THE CULTURE OF CALCEOLARIAS.

(*Continued from page* 113.)

BY MR. JOHN GREEN, GARDENER TO SIR EDMUND ANTROBUS, BART.

THE plants that have been kept in a healthy growing state, and treated as recommended in my last letter, will by the first week in March have filled a No. 24 size pot. About that time I re-pot them for the last time into their blooming pots; the strongest growing kinds I put into No. 12, and the weaker kinds into No. 18; being very particular that the pots, if they are old ones, are quite clean and sweet, and rather wide topped, as spreading pots always keep the earth in a much better state for all plants than the upright kind.

I give them, as before, a liberal drainage, first by placing a quantity of large pieces of potsherds, then an equal quantity of lumps, as large as a hen's egg, of strong loam, bog mould, and cow-dung; over which I sprinkle some small potsherds to insure a good drainage; I add a little more loam and well-decayed cow-dung to the rest of the mixture. After this final potting I place the plants in front of the geranium-house, where I can shade them with bunting or gauze in hot weather, from mid-day sun. I shut the house up early in the afternoon, and give them a gentle syringing over the leaves as soon as the house is closed; and raise the temperature of the house to 45° at night, and 60° in the day; giving air as much as possible at every opportunity. Great care must be taken in watering, giving them only a limited quantity till the plants begin to fill the pots with roots, when a good supply is required; in addition to which I water them once a week with liquid manure from sheep-dung well fermented. The first bloom-stems grow very strong, and form very irregular heads of bloom, and are naked at the bottom; to prevent that I pinch all the blooming stems off, when they are about three inches above the surface. At the base of each shoot so pinched off will grow out several stems of an equal strength: and, in order to have the plants uniform in growth, a slight stake is placed to each stem, spreading equally over the pot, leaving plenty of room for the flowers to expand. They must of course be well fumigated with tobacco on the first appearance of green-fly; for if once injured by that pest they seldom recover.

My treatment for the shrubby kinds is the same as for the herbaceous, except they are propagated from cuttings instead of dividing.

The above, Sir, is a detailed statement of my practice; which if others follow strictly, they will have plants from eighteen inches to two feet high, and two feet in diameter; with two or three dozen flower-stems, thickly studded with hundreds of those truly splendid and elegant flowers, which continue beautiful for three or four months. Such I am sure will, in the estimation of every lover of flowers, be found worthy of a place in the finest collection of exotics in Great Britain.

I am, Sir, your most obedient servant,

JOHN GREEN.*

NEW AND CHOICE FLOWERS AND ORNAMENTAL SHRUBS ON SALE.

As we are frequently asked by correspondents, whom we would willingly oblige and yet cannot answer individually, where flowering shrubs and plants are to be had of the best quality and most certain growth;—we purpose, from time to time, to give short notices of those which the most eminent breeders have of their own growing, and which therefore they can recommend as being sure in their growth, and true to their characters. When the parties have decided upon the breeder who is to supply them, they have only to make application for a priced list by post; and from this they can make up their orders, and transmitting them, can have them just as well executed as if they themselves were on the spot.

Florists, whether professional or amateur, will not fail to see the advantage of this kind of information, especially as coming from us who have no plant to sell, no party to serve, and no interest in the matter farther than a desire that they who wish for plants should obtain exactly what they want, and that in a fair

* Fine plants of almost all the Calceolarias bred by Mr. Green may be obtained from Mr. Cattleugh of Chelsea; every plant sent out by whom may be depended upon as healthy and true to its characters. Mr. Plant, at Cheadle in Staffordshire, has also an extensive, varied, and valuable stock of Calceolarias, at moderate prices.

growing state, and not forced for sale, and thus unfit for ordinary growing, as is sometimes the case with plants obtained from the understrappers of the floral art.

We anxiously solicit well-authenticated communications for this department of our journal; and we assure our readers that, in every practical case, we shall personally examine those collections which we recommend. Those to be noticed in the sequel of this article, we have seen in progress, and many of them in flower, either in the mother plant, (the two plants in case of a hybrid,) or the individual itself; and therefore we can speak of them with the utmost confidence. In a single number we can of course notice only one or two collections; but we shall make every reasonable effort to do justice to all.

Some may suppose that the time which we have chosen for the commencement of this department is not the proper one; because many have already planted their tulips and other choice bulbs for the ensuing season; and the time for arranging border flowers has not yet arrived. From this we dissent. The winter's pause is, though there are several exceptions, the proper time for moving all plants with the least possible waste of their growing energies; and with regard even to tulips and other bulbs which are usually put into the ground in the end of autumn or the beginning of winter, we are by no means sure that that is the very best mode of practice, especially for that most numerous class of growers, who grow but a little spot and have not all the accommodations of a first-rate professional grower. If the winter shall turn out either very cold or very rainy,—and English winters are generally the one or the other,—we think it advisable that those who only grow a few tulips or other bulbs for ornament, should not put them in the ground till the spring. They may flower later by this treatment, but we are pretty certain that they will flower better. If they are put in early, and very wet weather ensues, they are in danger of being rotted; and if they begin to bourgeon, and severe cold sets in, they are chilled; or if protected by mats, litter, or any other means, they are apt to be drawn up and enfeebled. Therefore, excepting in the case of those who have every accommodation for the very highest artificial treatment, we would recommend culture according to nature. We shall however have frequent opportunities of reverting to this part of the subject; and therefore we shall proceed to our enumeration.

MR. GROOM OF WALWORTH

Has a select assortment of the very choicest florist's flowers; and in none can the bulbs be preserved in a better state, or the growing plants in finer and more healthy condition, and at the same time as hardy as their nature will admit, which is a grand point in the case of flowers that are to be removed.

Of his tulips we need hardly speak,—they are so well known, and so justly esteemed for their beauty, their freedom of growth, and the little disposition the colours have to run, even under very ordinary treatment. Of them he still has an abundant supply, as also of hyacinths and other Dutch bulbs, some of them of novel and beautiful varieties. His collection of carnations and picottees is also very superior; and the yellow picottees in particular are above all praise. Nor must we forget pinks of the most perfect forms and choice colours. His auriculas are also very fine and in considerable variety. Of *Lilium lancefolium* (*speciosum*) he has many fine bulbs fit for sending out, both of *Album* and *Punctatum*; and as he has succeeded in obtaining perfect seeds after cross impregnation, we may look for some fine new varieties in course of time. One of the most delightful new plants in this collection is *Verbena Groomiana*, which is of the most intense scarlet that can be imagined. He has also several new species of the pinus family, from the Himalaya and the Mexican mountains, which are becoming so fashionable in ornamental planting, and which so well deserve every attention that can be bestowed on them. The wood of the Deodora furnishes a timber for all time, more imperishable than bronze or granite; and many of the species are exceedingly graceful when growing—rising like cones of beryl from the lawn or the open glades of the arboretum or the shrubbery.

MESSRS. ROLLISSON OF TOOTING

Have a much more extensive and varied collection than Mr. Groom, though their leading subjects are somewhat different. From the number and extent of their grounds they are enabled to cultivate almost everything, from the most common cottage plant to the most rare and expensive stove one. To enter upon any analysis of such a collection as theirs, would of course be out of the question; and therefore we must content ourselves with saying that every thing which they have to send out is the choicest of its

kind, and sent out in the very best condition for its successful growth. The following short list contains the names of a few of the finest ones, arranged according to the situations; and with it we must reluctantly close this department of our journal for the present month.

A List of new and choice HARDY and TENDER PLANTS cultivated at the TOOTING NURSERY, for Sale.

STOVE PLANTS.

Lagerstræmia elegans.
Inga Harrisii.
Hoya pendula.
Brownlowia grandiflora.
Petræa Staplesiæ.
Melastoma robusta.
Bignonia crispa.
Cerbera Ackermannii.
Combretum macrophyllum.
Gesneria lanata.
Kempfera elegans.
Jonesia aseca.
Gloxinia rubra.
Rondeletia speciosa.
Æschynanthes grandiflora.
ramosissima.
Barringtonia speciosa.
Brunsfelsia Lockhartii.
Thunbergia Hawtoyneana.
Thibandia glabra
setigera.
Jasminum ligustrium.
stellare.
Convolvulus pentanthus.
Cœnopteris vivipara.

GREENHOUSE PLANTS.

Bignonia Tweediana.
Ipomea physianthifolia.
Learii.
scabra.
Batatas betacea.
bonoriensis.
Portulacea Thellussoni.
Jasminum glaucum.
Quadria heterophylla.
Cobea stipularis.
Prostranthera rotundifolia.
Bouvardia splendens.
Cotoniaster denticulata.
Grevelia absynthifolia.
ferruginea.
Drummondii.
bipinnatifida.
triternata.
Azalea indica Kermesina.
concolor.
superba.
rotundifolia.
amabilis.
semi-double scarlet.
speciosissima.
Epacris mucronata.
carnumbrata.
nova species.
Talapea speciosissima.
Dilwynia rudis.
speciosissima.
ericoides.
Glycine Backhousiana.
Platylobium Murrayanum.
Oxylobium capitatum.
retusum.
Burtonia violacea.
Callistachy's linearifolia.
Magnolia Harwicus.
Corræa grandiflora.
Chorozema Dicksoni.
varium rotundifolium.
Henchmani major.
Kennedya pannosa.
nova species.
Zichya tricolor.
Eriostemon buxifolium.
Mirbilia dilatata.
speciosa.
grandiflora.
Hovea pungens.
ilicifolia.
Manglesii.
Rhododendron arboreum.
album.
roseum.
cinnamonum.
Rollissoni.

GREENHOUSE PLANTS—CONTINUED.

Rhododendron Zeylonicum.
Farreri.
barbatum.
strictum.
Roylii.
nova Nipaul.
Acacia sulcata.
brevifolia.
cultriformis.
Micranthium ericoides.
Thomasia nova species.
Illicium religiosum.
Pimelea nova.
Lissianthus Russellianus.
Anagozanthus Stirlingii.
nova.
splendida.
Bignonia heterophylla.

HARDY EVERGREEN AND FLOWERING SHRUBS AND HERBACEOUS PLANTS.

Magnolia intermedia.
Tussilago japonica.
Aconitum Sinensis.
Clematis Siebaldi.
azarea.
Lilium lancæfolius album.
punctatum.
speciosum.
venustum.
Spiræa barbata.
Potentilla leucochroa.
Quercus Fordii.
rugosa.
confertifolia.
nova Nipaul.
petrolaris.
Ægilops.
Halapensis.
castanafolia.
glabra.
Rhododendron guttatum.
multè maculatum.
Pontico-Caucasicum.
venustum.
festivum.
Victoria.
eximium.
carnumbratum.
varium.
new yellow.
Berberis tenuifolium.
mitis.
trifoliata.
Delphinium Barlowi.
Pæonia festiva.
Epimedium violaceum.
muschianum.
Euonymus echinata.
Monziesia empetrifolia.

ON SALVIA.

BY MR. R. PLANT.

WITH AN ENGRAVING OF THE "SALVIA PATENS."

THE *Salvia* is a very large, and at the same time an extremely natural genus; for a striking family-likeness, if we may so speak, is to be found throughout the whole of it. Loudon enumerates nearly 100 species; a great many of which we know to be highly ornamental, either as conservatory or border plants.

We take this opportunity of presenting to our readers a group of these deservedly well-known inhabitants of our parterres, in order to offer a few interesting remarks on their cultivation.—*S. patens*, of which we intend to speak more particularly, is certainly

the finest of the whole genus; its noble and brilliant blooms forming such an admirable contrast with those of *S. splendens* or *S. fulgens*, when planted in groups, and which we are of opinion is by far the best manner of planting these and many other kinds of plants. We have had the abovementioned species with the addition of *S. odorata*, which is white, and *aurea* (yellow), in the centre of a bed; and the dwarf species, *Tenorii* (blue), *Pinnata* (pink), and the little *Ægyptiaca* (white), round the border of the bed; and the whole formed one of the most brilliant masses it is possible to conceive. We have great pleasure in making it known to our readers, that *S. patens* we have found to be perfectly *hardy*,—and take some credit to ourselves for the originality of the remark.

The plant from which our drawing was taken, was by accident left out of doors in a pot among some others the whole of last winter; on examining the pot in the spring some signs of vegetation were visible; it was then repotted, and the usual care bestowed on it; the result has been three beautiful spikes of flowers. This proves it must be tolerably hardy, for the spot on which it stood was very much exposed.

Another method of keeping it through the winter we have practised with much success; it is this:—as soon as the plant has done blooming, gradually withdraw its supply of water until the foliage falls off; then take it out of the pot, cut the stem down to within about an inch of the tubers, then hang it up in a dry place secure from frost; here it will keep extremely well till wanted again, when it may be either started in a gentle bottom heat in March, and afterwards taken into the conservatory, or it may remain in the dry state till May, and then be planted in the open border.

The Salvia, treated as a greenhouse plant, requires a mixture of peat and loam in equal parts, with small but frequent shiftings. But when forced, which it will bear very well, it should be potted in peat alone; this gives a deeper green to the foliage, and a much greater brilliancy and depth of colour to the flowers.

In conclusion, we may mention, it derives its name from *Salvere*, "to save," in allusion to its supposed healing properties.

It belongs to the natural order Labiata; and in the Linnæan arrangement, it is placed in Class *Diandria*—Order *Monogynia*.

The How, near Halstead. R. P.

ON THE IRIS.

BY MR. R. PLANT.

In continuing my remarks on bulbous and tuberous-rooted plants, the next in importance to the Flower-Gardener is the Iris. The word Iris, we are informed, signified in the ancient Egyptian language, "Eye," or "Eye of Heaven," a term not inappropriate to this lovely genus. It also has received much notice from modern as well as ancient nations, though not so much cultivated now as some years back—at which time it was a reigning favourite, insomuch so that the Caffres, from whom great quantities were procured, call it "White-man's-flower." Now, though we may possibly be able to spare a few of the minor species of this extensive genus, to make room for, and in compliment to, our more recent introductions, when we consider the profusion of flowers, the variety of colour, and the ease with which it is grown, this plant will be found to occupy a place of no mean importance.

There are about 150 species of Iris, for the greater part tuberous-rooted, hardy, herbaceous plants; about six species are bulbous; and all, or nearly all, highly ornamental, and fully deserving the oriental appellation so long ago bestowed on them. Two only are natives of Britain—Pseudacorus and Fœtidissimi, both medicinal, but not worth notice to the florist. At the head of all the tuberous species stands I. Susiana. This is indeed a most singular, yet beautiful species. To say it resembles the livid markings on the back of a toad is perhaps no great inducement to the amateur; yet to nothing but that, or the flowers of Cereopegia elegans, can it be compared. Some difficulty is occasionally felt in causing this plant to blow; but if planted in a warm situation, on a rich friable loam, and left undisturbed, it will flower freely in the course of two, or at most three years. It will bear forcing under judicious management: for this purpose, choose a strong root, and in November put it into a large pot (32), using a mixture of loam and peat, with sufficient sand to keep it open; keep it in a cold frame till January, when the heat must be increased very gradually till it will bear the stove, which should be about the beginning of March, and as soon as the flower is expanded, remove it into the greenhouse. This, though attended with trouble, is repaid with one of the most extraordinary flowers in nature.

Of the tall growing kinds—Germanica, Pallida, Florentina, Sambucina, Lurida, and Variegata may be mentioned as the most prominent: these are well suited for open shrubberies, &c. Of the dwarf varieties, such as Chinensis, Biflora, Sub-Biflora, crestata pumila, Flavissima graminea, &c., are very pretty ornaments of the flower border, rockwork, &c., and will bear the smoke and dust of confined suburban districts. I. Fimbriata, Orientalis, and Flavescense, are rather tender, requiring the greenhouse to bring them to perfection; they should be potted in soil similar to that recommended for I. Susiana; they require good pot room; and to cause them to flower finer and more freely, remove the suckers as soon as they appear.

We now come to the bulbous rooted species: — they are Xiphium, Xiphiodes, Alata, Lusitanica, Tenuifolia, and Persica. The first two are more strictly florist's flowers; the first, Xiphium, is the Spanish Iris of florists, and Xiphiodes is commonly known as the English Iris. This is more extensively cultivated than any other species, and it well deserves the preference shown it: in this we have a greater variety of colours than is to be found in one species of any other genus: from the purest white to a bright azure, it ranges on to the deepest violet; and even red is found in the tints of this lovely flower,—a colour very uncommon to a flower in which blue is, or ever has been, a predominant colour. Yellow is, I believe, absent: this I should think might be easily remedied by impregnation, as it is found in some of the varieties of Xiphium, and that, too, extremely bright. This, however, is merely surmise; and, if not right, I should feel obliged by correction from any of your readers.

The culture of this, and indeed all the bulbous species, with the exception of I. Persica, is extremely simple. They should be planted early in October in a bed of any tolerably rich soil, keeping the roots about six inches apart, and about four inches deep, that is, from the point of the bulb to the surface of the soil. They may be allowed to remain in the same place two or three years; but when required to be taken up, it should be done about a fortnight or three weeks after they have done blooming. Keep them on the open ground entirely out of the sun; and the planting must not be deferred longer than possible, or the bulb begins to vegetate, and consequently becomes weakened. The planting of the varieties of Xiphium, or Spanish Iris, may be deferred a month

after those of Xiphiodes, as they come up so much sooner: in every other respect the treatment is uniform.

I. Persica requires the greenhouse; it is a very pretty species, and is highly odoriferous. I. Tuberosa is another very ornamental species; it is tolerably hardy, and with the same treatment as that of Xiphiodes will flower freely.

The varieties of English Iris are raised from seed. This should be sown in October, on an east border, sown thin and covered with about an inch of earth; they require no further care, with the exception of weeding, till the third year, when they should be planted out; and when in bloom, which will be the following summer, the good flowers should be marked and the bad ones thrown away.

The Iris is the type of an order, the component plants of which are found in nearly every quarter of the globe. Many of them are of great use in medicine; and all of them great favourites with the gardener on account of their beautiful, yet frail flowers.

R. PLANT.

The How, near Halsted.

THE FLORIST'S LETTER-BOX.

As many of the questions put to us, as well as the hints with which we are favoured, through the kindness of our numerous, rapidly-increasing, and, we may add, most agreeable and intelligent correspondents;—as many of these are much too important for mere notices on our monthly wrapper, and yet somewhat too brief for appearing as separate articles, we have resolved to devote a certain portion of every succeeding Number to them under the above title; and we earnestly solicit an increase in the number of such correspondents, whether they have advice to offer or to ask for. Both shall be equally well received, and meet with the most candid and impartial consideration. It matters not how much soever the opinions of our correspondents may differ from our own opinions, nor is the fact of what is advanced being erroneous an insuperable exception against it; for in all experimental sciences, and of course in floriculture among the rest, error is often the lever by means of which truth is raised from the quarry.

One prefatory word more: we have received several letters complaining that too many of our pages are devoted to "exotics," and too few to those "common flowers" which may be cultivated by persons in all situations of life. Now, in the matter of new and choice exotics, which are yet rare, and

consequently high priced, in this country,—and in those important general truths, relating to the superior culture and flowering of all plants, which are clearly and obviously deducible from the study of these curious and rare ones,—we possess advantages superior to those possessed by any, or perhaps by all, of our contemporaries; and we should be doing injustice to the floricultural world, did we not endeavour to share those advantages with its members, to the full extent of our ability. Florist's flowers, and those common border-flowers which, though highly interesting in the way of ornament, are not petted by florists, at least according to the fashion of the present time, shall not want our attention upon any one occasion where we can find something new and valuable to communicate; but to treat habitually of that which thousands are cultivating, in a great many situations and modes, and all with pretty equal success, would be a most unprofitable and almost interminable labour. Then, as to "exotics," we would bid the possessor of even a limited number of the most common flowers, run over his collection, and find out how many of them were not originally exotics, and as much prized in the day of their novelty, as those tropical flowers, which have given to floriculture a new character and a greater impulse than it ever previously received.

It is a well-established fact, and one of which we shall take an early opportunity of explaining the rationale, that native plants are much more difficult to improve by culture, and to maintain in an improved state, than exotics. Some of the wild plants of our mountains—as for example *Rosa spinosissima*—have been brought down to warmer situations and improved; but they are all much more delicate and difficult to keep than those plants which are obviously natives of foreign and more southerly climates. If we are to improve successfully, we must get our original plant from a warmer country upon the average, and one in which the succession and character of the seasons are different, otherwise we burden ourselves with the greatest possible labour, and are rewarded by the least possible effect. In farther corroboration of this, let any one fetch a plant from the field or the meadow immediately outside his garden, and try what he can do in the way of improving that. By stimulating manure he may get a larger growth in the individual; but the flowers will not be improved, and the flowering propensity will be lowered. Hence it is that even those which are now our most common border-flowers, are all originally importations; and we are convinced that not even the pink and the daisy of the gardens have been bred in this country out of the native species.

It should farther be borne in mind, that in the case of every flower, be it what it may, it is not the flower itself, but the associations which it calls up, that constitute the real charm—that pleasure in floriculture which is the purest, sweetest, and most refined of all our pleasures. With this short preface we proceed to the contents of our "Letter-Box."

COMMELINA CŒLESTRIS.—The best mode of treating this beautiful plant, so as to get it to flower with certainty, in perfection, and in abundance, is to pot the plants in rich compost, which compost should consist of equal parts of loam, sand, peat, and leaf-mould, with a little well-rotted manure added. The bulbs should be potted early in the season, say about the beginning of March. They ought to be put into a little heat until they begin to push through the soil; and then they should be removed to the green-house, and placed as near

the glass as possible, so that they may not be drawn up When they get about two or three inches high, they should be removed into a frame, and air should be given them every fine day. If the weather is favourable, they should, about the beginning of May, be planted out in the bed or border where they are to be flowered: and here it would be necessary to cover them with glasses as long as there is any danger of frost. When this danger is over, the glass should be removed during the day; and, by the end of May, it may be dispensed with altogether. With this treatment, there is no fear of obtaining flowers in the utmost perfection.

After the flowering is over, and the growth of the year is entirely ceased, the bulbs should be taken up, dried, and put by, until they are again wanted for potting in the spring. They should be placed in a cool and dry situation, and left naked; for if sand or any other dry substance is put about them, it is apt to shrivel the bulbs, and thus weaken their vegetating energy, or destroy it altogether. If they are put away in a dry, cool, and clean place, and kept free of all extraneous matter, they will remain firm and fleshy, and grow more vigorously, and flower to greater perfection.

LECHENAULTIA FORMOSA.—This plant should be struck in pure white sand. The cuttings should be taken off in the early part of the season; and the wood should neither be over ripe nor under ripe. The utmost attention is necessary to the proper watering of the cuttings; they must never be allowed to be absolutely dry, neither should they be over wet. The sand in which they are to be struck should be pressed down as firmly as possible, and watered before they are inserted; they should also be covered with a bell-glass, and put into a little bottom heat; the bell-glass should be carefully wiped dry, at least once every day, and the best time of doing this is in the morning. If our correspondent, or any of our readers, wish to propagate this flower, there is scarcely a doubt of success if these simple directions are followed.

CRASSULA COCCINEA.—We are asked, "How do you account for the young shoots of the Crassula coccinea, which proceed from the stalk of the plant four inches from the ground, sending forth roots toward the ground? Is this from a want of nourishment in the parent plant, the leaves of which had died after flowering very nearly to the top, presenting a naked stem until the shoots were produced?" The answer to this query is as plain and evident as any answer can be; and the fact of the query being put, shows of how much more importance it is that the florist should be put in possession of the general principles of his art, than that he should con by rote the empirical treatment of individual species of plants, though sanctioned by the authority of all the first-rate growers under the canopy of heaven. If the plant had not belonged to a tribe strongly embued with the principle of vegetable life, his fancied kindness would have killed it outright; and, in the case which he cites, this kindness gave the energy an unnatural and unseemly direction. When the plant was in flower, it had got, with the "best intentions," no doubt,—which intentions, unless guided by principle, ought always to be sent to that pavement of which they are the appropriate materials,—far too much water; and as the self-vegetation is partially suspended, and the roots languid, during the process of flowering, the roots in the pot had been rotted, or so much macerated in the superfluous and injurious moisture, that they were no longer able to perform their func-

tions; and the vital energy of the plant had retreated to the lower part of the stem, or the collet between the root and stem, which is the last refuge of vegetable life, when assailed either by severity of nature or unskilfulness of art. When the removal of the flowers, and the falling of the leaves—no longer vital, allowed the remaining life of the plant to act, it had no means of acting but by pushing out those lateral shoots, and sending roots for them to feel for a new resting-place; and when such an event occurs, the best way would be to separate the shoots, and pot them as fresh plants, although it is very doubtful whether they ever could acquire the strength and beauty of such as have not undergone so untoward a calamity. The general conclusion to be drawn from this is, that the watering of plants in such a manner as to produce the greatest possible advantages, is a matter of great nicety, and never can be done, except by those who have a thorough knowledge of the nature of the plant, and of the country of which it is native.

CALENDAR FOR DECEMBER.

STOVE.—From the increase of fire-heat the plants here will be found to dry much faster than last month; they must consequently be looked over pretty often: keep them moderately damp. Forcing shrubs, bulbs, &c., will require water once a day; and as the buds swell, a little extra may be given; and if any open their flowers this month remove them to the greenhouse, and bring others into their places. Above every thing, take care that each plant has a good drainage.

GREENHOUSE.—A little fire should be used in wet weather, even though it is mild, if there is any appearance of mildew or damp. Chrysanthemums will still be in flower: avoid crowding them, or any other plants. Keep the plants here rather dry than wet; embrace every opportunity of sun-shining, to give air. Pick off dead leaves, and keep the plants clean.

FLOWER GARDEN.

Little can be done here this month. Beside digging borders, &c., look after Auriculas, Picottees, Carnations, &c.; keep them free from dead leaves or other decaying matter; give them but very little water. Tulips should have all the weather, but tender bulbs will require a little loose covering; matt up tender trees and shrubs; prune and remove shrubs when the weather is open. This is a good time to lay in a stock of peat, loam, and other earths for potting.

THE WEATHER FOR OCTOBER.

[From one of those accidents that will sometimes occur, our notice of the weather for October did not reach the printer: we therefore give a sentence or two this month.]

THOUGH the weather in the early part of this month was not unusually severe, yet every thing wore a much more wintry appearance than is usual at this time of the year. The progress of the season had stripped the trees of their leaves much sooner than ordinary; but still the leaves were fully matured, and came off with the same kindly cicatrix as if it had been later in the season. The buds, too, were plump and promising, and well enwrapped in their hybernacula; and there was no excess of underground heat to stimulate them to an untimely development. Indeed, in so far as arboraceous vegetation, whether deciduous or evergreen, was concerned, matters looked very promising for the ensuing season of growth.

The cutting winds and cold nights of September had spoiled the beauty of the flower borders; and the autumnal annuals, many of which had come up and flowered very imperfectly, ceased to be ornamental more early than in the average of years. The perennial-rooted flowers also died down sooner than usual in their annual stems; but even this had fully more the character of natural decay from maturity than of casualty; and, indeed, though the bloom was gone sooner than could have been wished, there was no cold severe enough to injure the hardy border plants. There is a pretty close relation between ligneous vegetation and their roots; and if we find that the wood is well ripened, and the buds promisingly set, we shall not err in concluding that perennial roots are in healthy condition.

It is better, too, for the whole,—trees, shrubs, and herbaceous plants, in all their varieties,—that they should subside gradually from their summer activity to their winter repose; because the constricting of the vessels, and the condensing of their contents, proceed by slow degrees, and consequently without rupture or laceration of the more delicate ones. This tells with great advantage when the season of action begins; as the buds have more resistance to overcome, and thus are more gradual in their development, more firm in their texture, and less liable to be injured by the cold winds of spring, than if winter had come suddenly upon the plant, and forced it to a premature state of rest.

Thus the weather in October, as in the preceding month, tended to prepare the exposed vegetables for an early winter; but still, in a climate like that of Europe, and especially that of Britain, there are too many disturbing causes for allowing any lengthened prediction of the weather.

THE WEATHER FOR NOVEMBER.

THE weather for November for this year has been, as the college porter said of Euclid's elements, "most puzzleanimous," whether we consider the latter half of the term as denoting the wind of Heaven, or the wits of the prognosticator.

The whole characters of the seasons immediately preceding, together with the early fall of the leaf, and some severe colds in the latter parts of September and in October, gave promise, according to the most usual course of seasons, that the winter would be both early and severe. But nature has so many ways of counteracting those results which, according to the general tenor of our partial and limited experience, we most confidently anticipate, that we ought always to insert a saving clause in our predictions. This is somewhat mortifying to our pride; but it really gives us more in the improvement of our industry than we lose in the other way—by compelling every cultivator to observe the weather for himself, regulate his operations accordingly, and never mind the almanack.

In the few remarks which from month to month we have made, we have always endeavoured to draw the attention of our readers to the great humidity of the preceding autumn, winter, and early part of the spring,—to the cooling of the earth to a considerable depth by this means,—and to the consequently diminished radiation of heat during the nights. This rendered the nights colder during the warm months than they are in the average of years; and if the southern and middle latitudes of Europe had kept as dry as they often do in October and the early part of November, the cold winds from the northern countries would have set in early, with frost and snow; and Britain, more especially the south-east of England which lies nearest to the continent, would have come in for a share; and that share would have been extended and prolonged in proportion to the strength and duration of the cold winds.

It seems, however, that the bottom cold of the more southerly lands has retarded, if not prevented this. The withdrawal of the sun in declination into the southern hemisphere, has been, from the diminution of heat radiated from the earth, productive of greater cold in southern Europe than occurs at the same season in the average of years; and the result has been that the atmosphere, rendered less able to keep humidity suspended, has poured down deluges of rain which, in many places of France especially, have produced inundations, which have done considerable damage. Almost simultaneously with these there have been falls of snow in the extreme north of Europe; while in the intermediate parts the atmosphere has been kept in great agitation. At sea, the effects of this atmospheric disturbance have been most serious. The wind has at times blown hurricanes; and these have come unexpectedly, and with something of the character of "tiffoons" in monsoon seas. In fact, the rains in the south of Europe have borne more resemblance to the seasonal rains of a monsoon, than is usual in this part of the world.

Upon land in Britain, there has been a great deal of rain, but it has alternated, in whole days or portions of days, with dry weather; and though there have been a few flakes of snow, and a little frost during two or three nights, yet the temperature has upon the whole been moderate for the season. The soil is wet, certainly, and where retentive it is very much so, though not so much on the average of soils as might have been expected. This is partly owing to the alternation of fair weather, and partly to the character of the rain, which has fallen more violently and less continuously than autumnal rains generally do; and therefore it has run more off the surface, and soaked less into the soil. Hence, the danger of rotting is not so great to bulbous, tuberous,

and fleshy roots, as if the rain had been of a different character. Still, we think that the more delicate roots are quite as well out of the ground, unless the preparation and drainage are of superior order.

The heavy falls of rain in the south have certainly checked the southward motion of the cold atmosphere from the north, though we cannot venture to say that they have finally prevented it. Therefore we cannot say positively that there will be no very severe weather during the winter; but there is certainly less chance of it than there would have been if the south of Europe had continued dry.

In the latter part of the month the weather became more dry and settled; but with an increase of cold, sharp frosts during the nights, and hoar frost in the mornings.

FLORAL INTELLIGENCE.

Sept. 9. SOUTHERN DISTRICT OF PERTHSHIRE HORTICULTURAL SOCIETY. Prizes awarded:—

Best 12 Dahlias...1. Mr. Flockhart, Dumfermline, for Middlesex Rival, Miss Johnstone, Rienzi, Marquis of Lothian, Springfield Rival, Unique, Lady Kinnaird, Bree's Rosa, Hero of Sevenoaks, Stanford's Contender, Climax, Rival Sussex; 2. Mr. Miller.

Best 6 Dahlias...1. Mr. Finlayson, for Yellow Defiance, Pickwick, Beauty of the Plain, Rienzi, Lewisham Rival, Marquis of Lothian; 2. Mr. Gow.

Best Dahlia...1. Mr. Finlayson, for Rouge et Noir; 2. Mr. Smith.

Best Seedling Dahlia...Mr Paterson, Carsebridge.

Best 6 Hollyhocks...Mr. Miller.

Best 6 Phloxes...1. Mr. Smith, for Splendens, Elegans, Omniflora, Shepherdia, Cordata, Grandiflora Americana; 2. Mr. Miller.

Best 6 Tender Exotics...1. Mr. Gow, for Tropæolum pentaphyllum, Silene lacinata, Gloxinia caulescens, Erica Shannonia, E. obara umbellata, E. jasmineflora major; 2. Mr. Miller.

Best 4 Verbenas, plants in pots...Mr. Gow, for Tweediana var., T. superba, T. latifolia, Buistii.

Best 2 Fuchsias, plants in pots...Mr. Gow, for Fulgens, Recurvata.

Best 2 Cinerarias, plants in pots...Mr. Gow, for Waterhousiana, Bain's Seedling.

Best 2 Exotic Shrubby Plants, in pots...Mr. Gow, for Erica Irbyana, E. ampullacea.

Best 6 Stocks, 3 sorts...1. Mr. Mathieson; 2. Mr. Weir.

Best 6 French Marigolds, sorts...1 Mr. Finlayson; 2. Mr. Paul.

Best 6 China Asters, sorts...1. Mr. Gow; 2. Mr. Finlayson.

Best 12 Annuals...Mr Weir, for Schizanthus pinnatus, Oxyura chrysanthemoides, Œnothera bifrons, Madia elegans, Branching Larkspur, Purple Sweet Sultan, Clarkia alba, Malva coccinea, Bartonia aurea, Rhodanthe Manglesii, Lupinus Cruikshanksii. Jacobea purpurea.

Best 6 Perennial Herbaceous Plants...Mr. Gow, for Eccrimocarpus scaber, Rhodochiton volubile, Malva crenata, Liatris Spicata, Chelone barbata, Mimulus cardinalis var.

Best 12 Pansies...1. Mr. Finlayson, for Alcon, Cremona, Ada, Amadis, Juliana, Coronation, Gem, Amato, Daphne, Earl Durham, Napoleon, Lord Lonsdale; 2. Mr. Gow.

Best 6 Carnations...Mr. Gow, for Leny's Queen, Berrel's No. 56—Picottees; Pearson's Madame Mara, Cottager—Flakes; Smith's King, Lady Lindsay—Bizarres.

Best 2 Geraniums, in pots...Mr. Gow, for Imogene, General Moore.

Sept. 15. NORTH LONDON AMATEUR FLORICULTURAL SOCIETY. Prizes awarded:—

First prize, a silver cup, value six guineas...1. Mr. Widnall, Grantchester, for Argo, Cambridge Hero, Conductor, Duchess of Devonshire, Ne plus Ultra, Rienzi, Sylph, Pickwick, Nicholas Nickleby, Defender, Defiance, Bishop of Salisbury, Sir J. Astley, Beauty of Wandsworth, Pilot, Climax, Diana, Unique, Headley's Perfection, Martha, Amato, Bayadere, Duchess of Richmond, Countess of Pembroke, Springfield Rival, Penelope, Dodd's Mary, Grenadier, Warminster Rival, Lewisham Rival, Advancer, Beauty of the Plain, Egyptian Prince, Springfield Major, Pamplin's Bloomsbury, President of the West, Windmill-hill Rival, Hylas, Hope, Miss Johnstone, Lady Bathurst, Rival Sussex, Royal Standard, Hon. Stuart Wortley, Grace Darling, Francis, Mrs. Newby, and Phenomenon; 2. Mr. Alexander Kingsland, for Amato, Advancer, Climax, Beauty of the Plain, Cambridge Hero, Grace Darling, Charles the Twelfth (Mortiboy's), Countess of Pembroke,

Conductor, Contender (Girling's), Contender (Stanford's), Duchess of Richmond, Essex Rival, Eva, Fireball, Hofer, Dodd's Mary, Hope, Hylas, Miss Johnson, Unique, Ne plus Ultra, Nicholas Nickleby, Pickwick, Penelope, Rival Sussex, Rival Queen, Superb, Parson's Rival, Rienzi, Suffolk Hero, Scarlet Perfection, Wallace (Evans's), Watford Surprise, Yellow Defiance, Enchantress (Holmes's), Julia (Robinson's), Phenomenon, Crimson Defiance, Optime (Thurtell's), Birmingham Premier, Coronal (Squibb's), Edith Plantagenet, Martha, Sarah, Springfield Rival, Sir J. Astley, Captain Boldero, and Mrs. Newby; 3. Messrs. Smith and Co., Cambridge Heath, for Pavonia, Sylph, Ne plus Ultra, Pamplin's Bloomsbury, Amato, Rufus, Phenomenon, Utopia, Lilacea, Argo, Prince Albert, Eva, Lady Holland, Clio Perfecta, Hylas, Unique, Hornsey Surprise, Fat Boy, Knight's Coronation, Countess Pembroke, Conservative, Elizabeth, Pandora, Nicholas Nickleby, Victory, Amulet, Upway Hero, Bree's Rosa, Rival Sussex, Miss Scroope, Regina, Helperton Rival, Mortiboy's Charles the Twelfth, Glory of Croydon, Bishop of Winchester, Rouge et Noir, Edith Plantagenet, Stanford's Contender, Iver Champion, Essex Rival, Exquisite, Holmes's Juno, Captain Boldero, King Ella, Parson's Rival, Bayadere, Lee's Bloomsbury, and Leonidas.

Class 2...1. J. Bailey, for Topaz, Dodd's Mary, Victory, Amato, Duchess of Kent, Suffolk Hero, Eva, Conductor, Bentishall, Sir H. Fletcher, Beauty of West Riding, Beauty of the Plain, Pride of Sussex, Horwood's Defiance, Springfield Rival, Cambridge Hero, Robert Burt, Essex Rival, Grand Turk, Duchess of Richmond, Ne plus Ultra, Unique, Hope, Primrose; 2. Mr. Cook, for Springfield Rival, Conquering Hero, Grace Darling, Virgin Queen, Hope, Neville's Wallace, Argo, Ne plus Ultra, Girling's Ruby, Mungo Park, Penelope, Rival Sussex, Bree's Rosa, Warminster Rival, Annot Lisle, Queen of Beauties, President of the West, Beauty of the Plain, Defender, Evans's Wallace, Matilda, Henrietta, Unique, Le Grand Buadin; 3. Mr. C. Baker, for Beauty of the Plain, Hope, Ne plus Ultra, Sir J. Astley, Grace Darling, Miss Masters, Crimson Defiance, Miss Johnson, Lewisham Rival, Stanford's Contender, Sarah, Springfield Rival, Topaz, Essex Rival, Birmingham Premier, Pickwick, Parson's Rival, Fireball, Rival Granta, Unique, Amato, Conductor, Eva, and Sir H. Fletcher; 4. No names.

Class 3...1. Mr. Bates, for Pavonia, Rienzi, Coronal, Sir J. Astley, Lady Holland, Essex Rival, Unique, Pickwick, Grace Darling, Suffolk Hero, Nicholas Nickleby, Hero of Sevenoaks; 2. Mr. Cork, for Neville's Wallace, Elizabeth, Miss Scroope, Suffolk Hero, Dodd's Mary, Sir J. Astley, Essex Rival, Unique, Maresfield Hero, Fireball, General Washington, Yorkshire Hero; 3. Mr. Thurley, for Virgin Queen, Smith's Candidate, Dodd's Mary, Columbus, Squibb's Purple Perfection, Duchess of Portland, Amato, Suffolk Hero, Nicholas Nickleby, Unique, Fireball, Hedley's Perfection; 4. Mr. Cook, for Jones's Francis, Conquering Hero, Grace Darling, Garth's Queen of Beauties, Pickwick, Climax, Ne plus Ultra, Springfield Rival, Neville's Wallace, President of the West, Matilda, Tantalus; 5. Mr. Gray, for Watford Surprise, Lewisham Rival, Hope, Unique, Elizabeth, Climax, Warminster Rival, Grace Darling, Charles the Twelfth, Lady Maclean, Springfield Rival, Windmill-hill Rival; 6. Mr. Powell, for Sir J. Astley, Edith Plantagenet, Pickwick, King Edward, Essex Rival, Cox's Washington, Unique, Ne plus Ultra, Nicholas Nickleby, Ringleader, Beauty of the East, Lovely Ann; 7. Mr. Reynolds, for Grace Darling, Suffolk Hero, Dodd's Mary, Essex Rival, Penelope, Pickwick, Sir J. Astley, Eva, Fireball, Unique, Contender, Nicholas Nickleby; 8. Mr. Lang, for Yellow Defiance, Amato, Duke of Richmond, Dodd's Mary, Essex Rival, Penelope, Lewisham Rival, Hope, Grace Darling, Arabella, Advancer, and Unique.

Class 4...1. No names; 2. Mr. Airzee, for Horwood's Defiance, Hope, Eva, Essex Rival, Grace Darling, Yellow Defiance, Fireball, Unique, Penelope, Climax, Nicholas Nickleby, Sir J. Astley; 3. No names; 4. Mr. Reeve, for Essex Rival, Eva, Alpha, Miss Scroop, Hope, Victory, Amato, Colossus, Conqueror of Europe, Unique, Watford Surprise, Triumphant; 5. Mr. Catmur, No names; 6. Mr. Phillips, for Grace Darling, Hope, Essex Rival, Watford Surprise, Miss Masters, Sir H. Fletcher, Rienzi, Ne plus Ultra, Glory of the West, Topaz, Unique, Advancer; 7. and 8. No names returned.

Seedlings, 1839, 4 blooms...1. Mr. Widnall, for Widnall's Queen; 2. Ditto, for Widnall's Eclipse.

Seedlings, 1840...1. Mr. Parmenter; 2. Mr. Bragg.

Devices in Dahlias...1. Mr. Cork, for a representation of her Majesty and Prince Albert on horseback; 2. Mr. Macfield, for a gigantic Harlequin.

Sept. 16. Hexham Floral and Horticultural Exhibition. Prizes awarded:—

Premier prize of £2 in plate, given by Mr. T. Appleby, nurseryman, Neasham, near Darlington, for the best stand of 20 Dahlias of sorts...Mr. Thomas Aitchison, gardener to T. W. Beaumont, Esq. Bywell Hall, for Argo, Dodd's Grace Darling, Virgin Queen, Thurtell's Meteor, Dandy's Amato, Gaines's Primrose, Ovid, Anna Augusta Broadwood, Lewisham Rival, Rienzi, Nicholas Nickleby, Rival Granta, Pilot, Marchioness of Lansdowne, Springfield Rival, Topaz, Hedley's Perfection, Rival Sussex, Windmill hill Rival, Egyptian King.

A prize of 6 plants of Dahlias, given by Mr. T. Appleby, for the second best 20 Dahlias... Mr. H. Dewar, gardener to W. Cuthbert, Esq. Beaulont, for Eva, Seedling, Dodd's Mary, Amato, Suffolk Hero, Virgin Queen, Mitchell's Duchess of Kent, Royal Standard, Dodd's Grace Darling, Miss Johnston, Sparry's Beauty of the Plain, Primrose, Egyptian King, Lewisham Rival, President of the West, Unique, Duchess of Richmond, Climax, Lady Maclean, Essex Rival.

GENTLEMEN'S GARDENERS' CLASS.

Best 18 Dahlias of sorts...1. Mr. N. Foster, gardener to W. Donkin, Esq. for Windmill-hill Rival, Lewisham Rival, Glory of Plymouth, Marquis of Lothian, Springfield Rival, Essex Rival, Horwood's Defiance, Eva, Rosetta, Miss Johnston, Yellow Defiance, Clark's Julia, Fireball, Rival Sussex, Stuart Wortley. Ruby, Egyptian King, Primrose;...2. Mr. Aitchison, for Grace Darling, Primrose. Rival Granta, Virgin Queen, Springfield Rival, Marchioness of Lansdowne, Nicholas Nickleby, Amato, Miss Johnston, Lewisham Rival, Topaz, Stuart Wortley, Essex Rival, Unique, Rienzi, Egyptian King, Conductor, Pilot;... 3. Mr. H. Dewar, for Eva, Amato, Virgin Queen, Rival Sussex, Dodd's Mary, Knight's Victory, Miss Johnston, Beauty of the Plain, Seedling, Countess of Pembroke, Fireball, Lewisham Rival, Climax, Bowling-green Rival, Essex Rival, Rienzi, Egyptian King, Lady Maclean.

Best 12 Dahlias...1. Mr. John Watson, gardener to M. Anderson, Esq. Jesmond, Newcastle, for Essex Rival, Dodd's Queen of Sarum, Gaines's Primrose, Stamford's Contender, Egyptian King, Diomede, Marquis of Lothian, Dodd's Mary, Miss Johnstone, Marchioness of Lansdowne, Sparry's Beauty of the Plain, Rival Sussex;...2. Mr. H. Dewar, for Eva, Middlesex Rival, Virgin Queen, Suffolk Hero, Miss Johnston, Lady Kinnaird, Amato, Egyptian King, Ruby, Lewisham Rival, Clark's Julia, Marchioness of Lansdowne;... 3. Mr. N. Foster, for Virgin Queen, Marquis of Lothian, Rival Sussex, Dodd's Mary, Horwood's Defiance, Ruby, Stamford's Contender, Ne plus Ultra, Unique, Egyptian King, W. Conductor, Glory of Plymouth.

Best 6 Dahlias...1. Mr. N. Forster, for Lewisham Rival, Climax, Stamford's Contender, Egyptian King, Stuart Wortley, Unique;...2. Ditto, for Lewisham Rival, Bowling-green Rival, Egyptian King, Marquis of Lothian, Stuart Wortley, Unique;...3. Mr. T. Aitchison, for Virgin Queen, Springfield Rival, Duke of Devonshire, Lewisham Rival, Pilot, Conductor.

AMATEURS.

Best 9 Dahlias...1. Mr. Marshall, of Durham, for Duchess of Richmond, Rival Queen, Superba, Fireball, Grace Darling, Amato, Primrose, Annot Lisle, Virgin Queen;...2. Mr. Thomas Liddell, Gateshead, Lowfell;...3. Mr. Thomas Temperley, Newborough, for Miss Johnston, Virgin Queen, Climax, Hero of Wakefield, Gaines's Primrose, Marchioness of Tavistock, Dodd's Mary, Purple Perfection, Unique.

Best 6 Dahlias...1. Mr. Marshall, for Duchess of Richmond, Mount Pleasant Rival, Topaz, Hylas, Hero of Nottingham, Duchess of Portland;...2. Mr. Colcroft, for Dodd's Mary, Marquis of Lothian, Horwood's Defiance, Green's Wonder, Ansell's Unique, Miss Johnstone;...3. Mr. H. Marshall, Durham, Duchess of Richmond, Rival Queen, Superba, Dodd's Mary, Hylas, Squibb's Amato, Hero of Notlingham.

Best 3 Dahlias...1. Mr. John Vickers, of Newcastle, for Unique. Horwood's Defiance, Vesta;...2. Mr. Thomas Temperley, for Lady Crammond, Climax, Ansell's Unique;... 3. Mr. Thomas Liddell.

OPEN TO ALL EXHIBITORS.

Best tipped Dahlia...Messrs. Hedley, nurseryman, Yarm, for Duchess of Richmond.

Best self-coloured Dahlia...Messrs. Hedley, for Metella.

Best Seedling of 1839, 3 blooms...Mr. A. Newton, nurseryman, Newcastle, for Marquis of Waterford.

Ditto of 1840...Mr. H. Dewar.

GENTLEMEN'S GARDENERS.

Best 6 Exotic Plants in flower...Mr. H. Dewar, for Fuchsia fulgens, Erica Ewerlana, Erica Boweii, Erica de Cliffordia, Pimelia rosea, Gem Calceolaria.

Best 3 ditto...Mr. Dewar, for Fuchsia fulgens, Verbena incisa, Syphocampilus bicolor.

Best Exotic Plant...Mr. Thomas Jobling, gardener to H. Hinde, Esq. Stelling, for Cactus Ackermanii.

Best basket of Cut Flowers...1. Mr. Gaskin, gardener to — Butler, Esq. Brunton;... 2. Mr. H. Dewar.

Best basket of Annual Flowers...Mr. Gaskin, gardener to — Butler, Esq. Brunton.

AMATEURS.

Best basket of Hardy Flowers...1. Mr. Gibson, of Hexham; 2. Mr. Watson, of Hexham.

Best 12 Pansies...Mr. Thomas Shotton, of Hexham.

OPEN TO ALL.

Best 12 Pansies...Mr. John Watson, of Jesmond, for Radiata, Coronation, Purple Perfection, Maria, Leonida, Queen Vicoria, Lilac Perfection, Scott's Helen, Charlton's Seedling, Duke of Wellington, Corinne, Anna Maria, Conqueror.

Best 12 Russian Stocks...Mr. R. Gibson.

Best 12 German Asters...Mr. Aitchison.

Best 12 French Marigons...Mr. R. Gibson.

Best Double Balsam...Mr. H. Dewar.

Best Cockscomb...Mr. John Stevenson, gardener to J. W. Charlton, Esq. of Hesleyside.

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